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ABSTRACT

This book compares the teaching methods of Europe with the United States as related to the development of geography education and the problems of geography education in U.S. schools. The book comprehensively discusses and evaluates the history of geography instruction, tracing that history from the time of the Greeks and examining influences up to the beginning of the 19th century. Featuring the innovative and influential methods of Pestalozzi, a review of how geography was taught in Great Britain and Ireland in the nineteenth and twentieth centuries is outlined. Teaching by the inductive method and discovery by personal observation as advocated by Pestalozzi are strongly recommended. The time is ripe for American classrooms to adopt the idea that learning geography first hand by actual experience of the environment and by active teaching methods produces positive results. (NL)

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Geography and Education

Kieran O Mahony

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THROUGH THE SOULS OF OUR FEET

Kieran O Mahony

Educare Press

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This book is dedicated to John K. Barry F.R.S.C.
for illuminating the way.

ABBREVIATIONS

A.G.T.I.
Association of Geography Teachers of Ireland.

G.A.
Geographical Association.

G.C.E.
General Certificate of Education.

G.T.
Geographical Teacher.

I.G.A.
Irish Geographical Association.

L.E.A.
Local Education Authority.

O.E.C.D.
Organization for Economic Co-operation and Development.

R.G.S.
Royal Geographical Society.

U.N.E.S.C.O.
United Nations Educational Scientific and Cultural Organization.

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FOREWORD

The idea of field work in geography education is not new in itself. What is new is the degree to which fieldwork has become an accepted practice in a wide spectrum of schools throughout the world. Direct observation leading to the deduction of universal principles in the study of the natural environment goes back to the beginning of civilization. The early Greeks were exponents of that method of discovery. In education, Plato and Aristotle expounded the belief that learning came about as a result of concrete experience--the open air environment was the place to study the open air environment.

Individual theorists, especially during the Renaissance period when Greek ideas were revived, continued to press for the use of the empirical method in the study of the physical environment. Rousseau, later incorporated the same ideas in his educational philosophies. Like Aristotle, he urged that the pupil should learn by progression from the particular to the general in concentric outward development. Rousseau was the theorist, Pestalozzi was the practitioner.

The fountain-head of teaching methodology, Pestalozzi, treated geography as a science and taught it through the inductive method. Discovery by personal observation, careful note-taking and empirical deductions were the basis of his look-and-see method. Ritter, a disciple of Pestalozzi, applied that method to geography and he is now regarded as one of the founding fathers of modern geographical science.

The growth of democracy and the rise of National systems of education went hand in hand. Prussia, where Pestalozzi's method was an accepted school practice, became the template for other European countries and the New World. In this way the inductive method spread rapidly and became an accepted practice in the schools of progressive nations.

In Britain, field work in geography education sprang from the influence of the Royal Geographic Society, rather than from Pestalozzi's influence, since his method failed to become widely established there. The Royal Geographic Society's initial priority was exploration coupled with a desire to improve the economic well-being of the home-land. Field work was an intrinsic element of exploration.

As the hitherto unexplored regions of the earth were opened up, it soon became obvious that extensive geography was drawing to a close and a drive towards the intensive geographical study was begun. The Royal Geographical Society appointed an inspector to undertake a comparative study of the position of geography in the schools of European countries and in America. As a result, reforms were introduced into third level institutions in Britain which eventually percolated down to the secondary and primary levels of education.

In spite of two world wars, recessions and depressions, the new methodology grew and flourished. In the Sixties, field centers were opened up in strategic parts of Britain. A few years later, the inductive method for teaching geography was accepted in Scotland and Northern Ireland in a similar manner to England and Wales. Modern geography pupils in Britain study geography from primary sources in the natural environment, using their innate abilities to observe record and deduce.

In the Republic of Ireland, on the other hand, field work in geography education is almost non-existent. Up to 1922, the year that the Irish Free State was set up, education was developing along similar lines to that of its near neighbors. But the educational philosophies of the new state precluded any further similarities. These philosophies included a desire to revive a language and culture which had been abandoned by the majority of the inhabitants. Teacher training and most of the schools were dominated by religious sects. Consequently the traditional methods of teaching geography by "rote learning" and "map pointing" were reinforced.

Geography education in the United States did not keep abreast of the development and growth experienced in Western Europe. Many influential and notable individuals worked tirelessly to keep the spark of discovery and learning alive in the schools of the growing new country. But the American school system was over-taxed with the drive to create a literate, national democracy. As a result one of the richest and most enjoyable forms of developing young minds was passed over.

The problem was compounded by a lack of properly trained teachers, since geography was not a subject in the curricula of most universities. There was a great need for a strong unified voice among professional geographers and academics to lobby on behalf of the youth for the proper treatment of their science in the educational institutions.

Now, a century after the National Geographic Society was founded, the time is ripe and the focus is present to rectify the state of geography in American classrooms.

FOREWORD

This study is an attempt to show that fieldwork in geography education has developed from being an idea in early Greek philosophy to becoming an integral part of modern school practice in most Western countries, and has yet to reach some educational institutes. It is the author's profound wish that young people will be taught geography in the field and will be given anew the zeal and verve of the early pioneers and explorers.

Nature is at once the school and schoolmaster

CHAPTER ONE

IDEAS IN ACTION

(1) Influences up to the beginning of the nineteenth century

EARLY GREEK TO CHRISTIAN

Since ancient times people have relied on direct observation as a means of learning about the earth's surface and the patterns resulting from human activity. Today, direct observation remains an important research method for geographers.

Travel, exploration and conquest have always been associated with geography. These were activities in which the Greeks excelled. In fact, the word *Geography* comes from the Greek *Geographia* which means earth description. Consequently, there are numerous references in early Greek tales to phenomonena which were essentially geographic in form. The Homeric poems contain many echoes of geographical lore gathered by Greek sea-faring peoples on their voyages to distant lands. These were woven into the story of Odysseus. Hence Homer may be termed the father of geography.

Herodotus (450 B.C.) could more justly claim this distinction, since he, in order to furnish a geographical background to his history, travelled widely and observantly in the near and Middle East, seeking out and questioning the learned in each locality. His accounts give a precise idea of the mode of living and the spatial distribution of people on the known world at the time.

The early explorers, in general, and Herodotus, in particular, provide us with the beginnings of geography. Many years later R.N. Rudmose Brown, first Professor of Geography, Sheffield University, stated "Geography lies at the confluence of many streams of thought."[1]

Brown, of course, was referring to an academic discipline, which, by 1948, was flourishing throughout the globe. The relevance of geography to education had long since been established. In addition, the exploratory work of the early Greeks had been incorporated in modern methodology as field work.

Brown's statement provides a suitable analogy for the science that is geography. He recognised the synthetic nature of the discipline - hence the fluvial metaphor. Not too obvious in the background, however, are the many pathways, some long and sinuous, which the differing branches of geography had to negotiate to achieve their present commanding position.

Plato

The Greeks referred to geography under such varied titles as Astronomy, Cosmography and Natural History. It is in these areas that Plato and Aristotle made their contribution to the theory of methodology in geographical education.

Chronologically, Plato was the first to propound the Utopia ideal based on his philosophical thinking. Plato's ideal state, as outlined in the *Republic*, involved educating the citizen for his particular role in life. Education for Plato had a practical goal. He was the theorist who laid many of the foundations of pedagogy.

Essentially, education for the Guardians was an eclectic one, because he borrowed at will from other systems. His ideal state pictured in the *Republic* was a combination of the most worthy features of Spartan discipline and Athenian culture.

In his book *Laws'* Plato's educational plan also had a practical function and nature. In this way he anticipated later generations of teaching method and ideologies. Furthermore, by advocating that play was the natural activity of the child, he became the forerunner of paedocentric education.

At the same time his ideas mirrored modern educational psychology because he recognised the need to proceed from the concrete to the abstract; the particular to the general.

Even though Plato's motivation was for his Utopian ideal, he stated the principles of modern pedagogy by combining education with the business of life. According to Plato:

> ......he who is to be a good builder, should play at building children's houses; he who is to be a good husbandman, at tilling the ground, and those who have the care of their education should provide them when young with mimic tools. They should learn beforehand the knowledge which they will afterwards require for their art. For example the future carpenter should learn to measure or apply the line in play; and the future warrior should learn riding, or some other exercises, for amusement, and the teacher should endeavour to direct the childrens inclinations and pleasures, by the help of amusements to their final aim in life. [2]

This statement on education and preparing for life, is still a cornerstone of pedagogic philosophy. Plato was a forerunner of modern geographical educationalists, advocating that effective learning utilized the senses before advancing to theory. Working from the particular to the general is desirable... in order to enlist the active interest of the child.[3]

Plato's contribution to education theory was enormous. He was the first to realise the dynamic interaction that could exist between the state and education, while his use of practical education and direct observation in studying the human environment clearly drew up the terms of reference for geography education for all generations.

ARISTOTLE

In 366 B.C., at the age of eighteen, Aristotle entered Plato's school at Athens. He remained there until his master's death in 348 B.C. While Plato's philosophies were a dominating influence on Aristotle, there were others. Unlike Plato, who was an aristocrat claiming descent from the ancient Royal House of Attica, Aristotle was an alien. He belonged to the middle class and could not become a citizen. Aristotle was accepted only because his father was court physician to the king of Macedon, and his family belonged to the great medical guild of the Asclediadae. After Plato's death Aristotle compiled his own philosophy .

Aristotle moved first to Assos and thence to Mitylene on the coast of Asia Minor, where he studied biology, especially marine biology.

The key factor in the study of biology was observation. Coupled with the urge for logical structure and classification, observation represents the essence of Aristotelean thought. Aristotle's influence as the father of scientific Zoology soon became apparent. Theophrastus, his immediate successor in the Lyceum, initiated the scientific study of Botany.[4]

At this time Biology, Zoology, and Botany - were still in their early stages of development. But, by strict adherence to the scientific method they blossomed and grew. The scientific method incorporated careful observation with accurate notation and classification that lead to sound scientific deductions. The techniques that Aristotle used in his scientific studies were also incorporated in his philosophies.

While he was still at Lesbos, Aristotle was called away from his research to tutor the young Alexander, prince of Macedon. This experience was to have far reaching consequences. From the beginning it was obvious that Alexander and his tutor differed enormously in their outlook on life. Aristotle, the theorist whose horizon was the city-state, was teaching the practitioner who was destined to fling his empire halfway across Asia.

Alexander did not forget his former teacher when he undertook his duties as emperor in later life. When he set about his conquests and travel, he arranged that "...all the information available about the government and constitutions of the states he invaded, details concerning the life, customs, and traditions of the people, accurate knowledge about the flora and fauna of these regions and many other facts, should be transmitted to Aristotle without delay."[5]

Aristotle received that data from Alexander. He then analysed, classified and deduced from it universal truths. Consequently, he produced an amalgam of eight books on the nature of the state, called the *Politics*. Since much of the information he received pertained to geographic knowledge, Aristotle's treatment of man in society closely resembled modern definitions of geography. He found that "Related households join to form a village in order to satisfy their physical needs; villages join in a city-state, the ultimate form of association, because it reaches the goal of self-sufficiency. The family is chronologically prior; the city state is logically prior."[6]

The evaluation of actual evidence, not 'a priori' theory, was the groundwork of Aristotle's thought. As a geographer, carefully observing and classifying phenomena new to mankind, he earned the distinction of becoming "the first scientific geographer and proved that the earth was a sphere by the circular shadow thrown on the moon during an eclipse, and by the shifting of the horizon as one travels from north to south and lost familiar stars, while new stars came into view."[7]

Aristotle, the theorist, laid much of the foundations of today's geography. Researching Alexander's first hand field work, he wrote not as an armchair philosopher, nor as a practising politician, but as a detached and concerned spectator whose thought was shaped by experience.

The Greeks contributed on a grand scale to the theory and practise of education. In particular, Plato and Aristotle remain significant as idealists who influenced educators and education in later years. They were the epitome of ideas in action, ideas which form the basis of almost all modern education systems.

When Greek supremacy was successfully challenged, much of the philosophies of the learned were either lost or forgotten. It was not till many years later that Aristotelean thought percolated into the universities and other such places of learning in Europe. In the meantime, his philosophies made a circuitous journey from Greece to Arabia, thence to North Africa and Spain before finally penetrating north of the Pyrenees to Europe.

(ii) Christianity to the Renaissance

Latin, Greek, Rhetoric and Dialectic remained the pre-eminent foci of educational thought during the period between the beginnings of Christianity and the Renaissance. In a society dominated by ecclesiastics and religion, it was natural that geography played no great role, except to appear sporadically in the background for doctrinal and liturgical purposes. Thus, for St. Augustine (354-430) astronomy was included in a liberal education, since "it was a means of determining the date of Easter and other church festivals and so could be of use to Christians."[8]

The growth of a liberal type of education and the development of geography into an academic discipline were closely aligned with the introduction of Aristotelean thought into Europe. The latter's works made a circuitous journey from Greece, beginning in Bagdad when the Caliph ordered his works translated into Arabic.

Averroes

Averroes (1126-1198), an Arabian thinker, attempted to combine Aristotle's philosophy with his own religious views and consequently roused the wrath of orthodox Mohammedans. This led to his expulsion from the Eastern Caliphate, and he was forced to take up residence in Spain. So his works filtered through Spain, to the rest of Europe, and "Aristotle thus came to Paris in an orientalised dress."[9]

Meanwhile, the seven liberal arts, the Trivium and the Quadrivium, comprised the curriculum of secondary and higher education throughout the mediaeval period and for long after. The Trivium, consisting of Grammar, Rhetoric and Dialectic was a preliminary to the Quadrivium, a study in Arithmetic, Geometry, Astronomy and Music.

Later, when the mediaeval universities developed, the subjects of the Trivium were relegated to the Grammar school, while the studies undertaken at the universities included the Quadrivium. Geography played no part, therefore, in either elementary or second level education, while any modicum of Astronomy studied at the universities pertained only to Religious feast days.

It was in Italy, however, that Greek influence was most prominent. Forced to evacuate their own country by Turkish invaders, especially after the fall of Constantinople in 1453, many Greek regfugees were drawn to the independent magnates of Italy where their ideas were freely accepted and developed. Renaissance philosophers sought inspiration from the primary sources in Latin and Greek. Thus Platonic and Aristotelean thought permeated their work. In this way the 'old' world was discovered.

During the Renaissance period, too, the frontiers of the known world were pushed back by epic journeys and exploratory voyages. The increasing appreciation of Greek writing ....served to elevate to respectability the study of the physical, factual work which had become a topic of particular interest during this period of trade and discovery.[10]

Between 1260 and 1265 Marco Polo undertook several expeditions from Venice to the borders of China and on to the Pacific. Similarly, in the last decade of the fifteenth century, Christopher Columbus discovered the new world and opened up the way for additional exploration.

Because of its geographic location of Portugal- cut off from the rest of Europe by Castille and Leon and in possession of approximately 300 miles of Atlantic coastline - it became the center from which much of the exploration was initiated. One by one contemporary fears and superstitions yielded under the weight of new and conclusive evidence. Diaz sailed south and rounded the tip of Africa (1486-88), Vasco Da Gama sailed to India (1497-99), and from 1519-22 Magellan circumnavigated the world.

Scientific discoveries and technological developments also took place that helped change man's perception of the universe. Copernicus (1473-1543) applied the principle of the relativity of motion to the Ptolmaic geocentric view of the Universe, and deduced that if the observer could escape from the Earth and look down upon the planetary ballet from a platform mounted high in outer space, he should see that the planets travel only in a forward direction. This was the birth of the heleocentric theory of the universe about the sun.

By this time conventional premises and truths had lost their validity. Europe was at the Age of Enlightenment. The discovery of the Old World, the opening up of the New World, and the development, by Gutenberg in 1438, of the printing press, resulted in an unprecedented expansion in the horizon of human experience. The geographic discoveries compounded by nuances in technology and scientific equipment resulted in such a volume of new geographical information, about the earth and the universe, that no longer could that science be overlooked by educationalists.

A body of educational thinkers emerged whose philosophies emanated from the Greek background and embodied much of the Aristotelean thought. Yet they were also products of the society of their day, influenced by the new developments in all branches of scientific knowledge. The most prominent of these was Desiderius Erasmus, who incorporated Aristotle's method of nature study in his thought.

Erasmus

Erasmus maintained that the educated man ought to know geography and the natural environment. Like all humanists of the day, Erasmus recommended that students use the early Greeks as source material, "with additions from [their] own observations."[11]

Erasmus advocated cultivating a keen sense of observation, thereby exploiting the inductive method. The study of the local environment was an intrinsic part of his education programme. He felt that "...the usual occurances of nature are not to be passed over. These again are partly drawn from antiquity, partly are within our own experiences.

I refer to rivers, springs, oceans, mountains, precious stones, trees, plants, flowers."[12]

Jean Luis Vives

In 1492, the year Columbus set out on his quest for the new world, Jean Luis Vives was born. Living until 1540 he witnessed and experienced the major changes that took place during the first half of the sixteenth century. Vives was a milestone in the development of the teaching method for geography education. Not since Aristotle's day did it achieve such a respectability and purpose. Every thinker is conditioned and moulded by the age in which he lived; this was certainly true of Vives. The influence of many aspects of his age and society is evident in his work.

In 1520, Erasmus -- then a senior member of the University of Louvain met and worked with the young Vives. There is no doubt that Erasmus had a great influence upon him, for Vives strongly reflects the attitudes and thoughts of Erasmus. Like Erasmus, he sympathized with Aristotelean thought concerning nature study and the natural environment. Nature was for Vives *"at once the school and schoolmaster."* [13] He believed that "The boy should study what he can see and feel, the sky, the weather, fire, air, water, the earth, with perhaps the help of one of the more harmless little geography books of Aristotle or one of his disciples."[14]

Vives made a considerable contribution to the psychology of education by his application of the method of empirical enquiry to the phenomena of cognition. This was a direct reaffirmation of Aristotle's philosophy, which discarded the hope of reaching an adequate explanation of mental activity from any 'a priori' starting point. Vives pursued an inquiry "by the method of observation and analysis of actual intellectual processes."[15] He maintained that this kind of study would exercise the pupil's imagination and judgement so long as it was first hand experience and not merely the reading of other men's findings.

Vives was, as a realist and idealist, a precursor of Francis Bacon -- a philosopher and educator who advocated practical first hand experience for learning. Vives' greatest contribution to education was in the field of 'Nature knowledge'. For him, as for all humanists, that study was useless unless it offered some practical value. He was a pioneer of realism, as he was of the inductive method. Above all, he strengthened geography's position as a scientific study and an educational force.

(iii) Towards a methodology: the religious influence

Ignatius Loyola

Vives was still propounding his educational philosophies when, in 1534, Ignatius Loyola formed the 'Society of Jesus'. It is commonly asserted, though perhaps innaccurately, that Vives influenced Loyola. They met at Bruges, yet it is likely that their coincidences of thought resulted from principles derived from common sources -- the schools of the Brethren and the University of Paris.

At the same time it is definite that Loyola was influenced by the geographic discoveries of the day. The *Ratio Studiorum* contained the educational idealogy of the Jesuits. "Geography was .... studied, not only of the district in which the college was situated, but the pupils were kept informed about the recent discoveries, and the work of the Order in the mission fields."[16]

In the Jesuit schools, therefore, many of the humanist methods and curricula were in use. Modern languages including the vernacular were taught, and science, history, and geography were also available. The lack of textbooks, that had previously troubled Vives, forced the Jesuits to write their own -- in Latin, of course.

Education was a means to an end for the Jesuits. Their main concern was to stem the advances of the Reformation. The education they provided, therefore, was church oriented and geared towards the needs of a ruling class. They concentrated mainly on higher education for the upper classes, who were likely to take up positions of power and responsibility within their church, and who, in turn, would maintain the Catholic position.

Comenius

On the other hand, Comenius, a Protestant and a keen disciple of Bacon, was imbued with quite different educational philosophies. His book *The Great Didactic* sets down the art of teaching all things to all men. This pansophic ideal was not new. The main influences on Comenius' thought were Wolfgang Ratke (1571-1635), and Johann Heinrich Alsted (1588-1638), both men being of similar mind where education was concerned. They believed that education should be based on the vernacular, and that it should be universal for boys and girls.

In addition to these philosophies, Comenius maintained that education should come through experience. Education, therefore, will be most effective when "everything [is] taught through the medium of the senses." [17] Comenius traveled widely, was familiar with both Bacon's work on inductive method and Copernicus' astronomical observations. Furthermore, he realised the value of practical experience as good teaching method, and advocated first-hand investigation from original sources.

By advocating universal schooling and the use of the vernacular in teaching situations Comenius anticipated modern systems of education. He introduced the concept of compulsory attendance and, in so doing, drew up the terms of reference of National Systems of Education.

Comenius advocated the need for a new direction in education that departed from traditional, cruel discipline to schooling in a loving, gentle atmosphere. In the same vein, he felt that the child could best be educated by utilizing the native tongue. Like Bacon he understood and promoted practical sense experience as the fundamental basis of all learning. Finally, he realized the dire need for the development of a method of teaching and a system whereby that method could be imparted to teachers.

The first to conduct an educational experiment along these lines was Duke Ernest the Pious (1601-1675), who, after the thirty years war in Gotha, resolved to restore the self-respect of his people. He saw that Comenius' educational ideas provided the solution. Two important factors emerge from this experiment: education was to be popular and attendance was to be compulsory. This experiment was later followed by Prussia along Pestalozzi's principles and it heralded the transfer of educational control from church to state.

Meanwhile, geography fieldwork differed little from that of Aristotle's time, except for that small number of theorists who, though they advocated practical work, realized very little of it. Europe, however, and educational endeavour were on the eve of change. The western world was about to shake off the shackles of mediaevalism and embrace revolutionary concepts of freedom and democracy.

(iv) Rousseau

This was the Europe into which, in 1712, Jean Jacques Rousseau was born. Educationally, there was very little new in what Rousseau said, yet he was the dynamic that brought about the transition from theory to practise. "Man is born free" he storms from the *Social Contract,* "But everywhere he is in chains." [18] The educator must create a state where the new freedom is a reality for all mankind. All that Rousseau wrote belied an anachronistic educational practice where Latin and Greek were the principal subjects, cruel punishment the standard motivational force, and handed-down knowledge the accepted norm. All thinking men were disturbed by the brashness of the truths emanating from the pages of the *Social Contract* and *Emile.* Education could never be the same again.

Rousseau differed from the Jesuits in that he took Emile right through from elementary schooling to manhood. He pointed out the importance of the senses and his methodolology involved a look-and-see approach.

Rousseau included the study of geography in Emile's studies, and restated the Baconian theme on inductive education, by proceeding from the particular to the general, through concentric outward development. Referring to Emile he wrote: "His geography will begin with the town he lives in and his father's country house, then the places between them, the rivers near them, and then the sun's aspect and how to find one's way by its aid. This is the meeting place. Let him make his own map, a very simple map, at first containing only two places; others may be added from time to time as he is able to estimate their distance and position."[19]

Basically, this method reflects Aristotle's belief that general concepts result from particular observations. It might also be claimed that Rousseau's advocacy of the look-and-see method, in which he shows that effects are the result of cause, leads to a better understanding of both one and the other.

It is not an exaggeration to claim that Rousseau's thinking in this respect informs all modern approaches to geography fieldwork for younger pupils. Rousseau strongly disagreed with the accepted methods of teaching geography, especially where teachers were substituting mimic tools for the real thing. Reflecting Vives and Aristotle, Rousseau pointed out that the earth was the geographer's laboratory. He rebuked the traditional teacher saying "You wish to teach this child geography and you provide him with globes, spheres and maps. What elaborate preparations? What is the use of all these symbols; why not begin by showing him the real thing so that he may at least know what you are thinking about."[20]

Rousseau was not an original thinker in the area of geography. He is significant because of his contribution to educational methodology. Where modern teaching practice is concerned, Rousseau's ideas on methodology form the basis of Pestalozzi's teaching principles; and Pestalozzi was, after all, the fountain-head of teacher training.

Summary

Modern fieldwork methodology, applicable in geography, stems from three important sources. First, the Jesuit school system made provision for higher education exclusively for the wealthy classes; second, the Comenian Pansophic ideal laid the groundwork for national systems and education for all; and finally, the methods outlined by Rousseau contained the key to liberal education, freed from the constraints of the clergy.

The Jesuit educators developed their school system for a specific purpose,-- the provision of an educated body of rulers to promulgate their religion. This was a direct response to, and an attempt to stem, the advancing tide of the Reformation.

Comenius provided the link between method and practice. Not only did he delimit a method of teaching, which preceded the national systems in using the vernacular, but he also insisted that education was not the prerogative of the few, but the right of the individual. He believed that "Not the children of the rich or of the powerful only but of all alike, boys and girls, noble and ignoble, rich and poor, in all cities and towns, villages and hamlets, should be sent to school."[21]

Rousseau was also concerned with the rights of the individual and universal education. Indeed his book *The Social Contract* provided the idealism for both the French and American Revolutions and was also the fountain-head of democratic principles.

Although Rousseau was not a practical man, his methodology, as outlined in the *Emile*, inspired many great educators who followed him. His importance lies in the fact that he provided the methodology upon which most of our modern systems are developed. His involvement was theoretical in that he was concerned with how best to convey the ideals to the masses. At this stage in Europe, where despotism, privilege and hypocricy were the accepted mores, there were no popular schools. Rousseau paved the way for the next generation of reformers. He immediately preceded and directly influenced Pestalozzi.

By the end of the eighteenth century, Europe was about to witness a change which was tantamount to a revolution. Education was about to become the concern of the state, the prerogative of the individual, and the salvation of nations. Geography, and particularly field activities, was to be a major part of a new age in which scientific utility was an intrinsic element. In the nineteenth century exploration and discovery again played an important part in the economic development of nations. The need for the heuristic method in education was essential in fostering this activity.

However, one man and his work, were responsible for the widespread use of this method. Pestalozzi, a Swiss educator, was destined to become the fountain-head of teacher training and a pioneer of modern methodology. He dominated educational matters around the turn of the nineteenth century. His ideas were accepted in all progresssive nations where democracy was taking root. Though his ideas and methods were new and startling for his time, much of his method has been adapted and incorporated into present-day educational theory and practice. His interpretation of Rousseau's social theory in his educational writings and practice made a permanent contribution to the improvement and development of education.

CHAPTER TWO

A MAN IN ACTION

PESTALOZZI: THE FOUR STAGES IN THE DEVELOPMENT OF HIS METHOD

Pestalozzi, a citizen of the Swiss Republic, was, like Rousseau, fired with the zeal of democracy. He read Rousseau with enthusiasm and understood the potential in education. His great object in life was the amelioration of the plight of the poor and in this respect he saw education as a panacea. To this end he neglected not only his personal health and well-being, but also that of his wife and son Jean Jacques (called after Rousseau). Pestalozzi's main educational principle was that every human being was entitled to the full development of the faculties with which he was born. This incorporated the Aristotelean philosophy of innate ability.

That Rousseau was a major influence on Pestalozzi, there can be little doubt, since the method and content of most modern movements in education spring from Rousseau. Yet there is a distinct contrast between Rousseau and Pestalozzi. Rousseau was a voice and nothing else. His actions tended to negate his writings. But Pestalozzi talked, walked, ate and played with his pupils, even in his own house. He was the epitome of a practical educator. His 'method' came about, not by reading or writing, but by careful and persistent observation of his pupils' progress, during experimentation.

(i) Neuhof

Pestalozzi's experiment at Neuhof was a failure. His idea, to incorporate education and farm work, was fundamentally sound, but his inability to organise and control expenditure, meant that the project was doomed to failure from the outset. What is of particular significance, however, is the fact that he began at the beginning, with the education of children. Further, he maintained the experiment on a practical basis for five years. Much of the 'method' which gradually evolved was based on his day-to-day observations, not only on his own son, but also on the first pupils at Neuhof.

It is, therefore, significant that the teacher and his pupils spent much of their time in the field. Consequently, the idea of fieldwork and the look-and-see approach became incorporated in his book *Leonard and Gertrude*, since that book was based on his personal observations in the hinterland of Neuhof.

Pestalozzi was a product of his age. The turmoils of war and his life's work were seldom separated. As the Ancien Regime was crumbling before the revolutionary pressures and democracy tentatively replaced it, Pestalozzi's ideas began to incorporate the freedom of the individual and the rights of man. For Pestalozzi, education was the key.

In the interlude between the Neuhof failure and his next educational venture, he produced literary accounts of his objective -- to raise the poor, through education, from their degraded position. In these works it became apparent that education and nature were at one for Pestalozzi.

At Neuhof, therefore, inquiries and experiment took up most of Pestalozzi's time and work. However, the background to his method had taken firm root in nature and would come to fruition later.

(ii) Stanz

The punishment meted out to the anti-government Catholic diehards provided the opportunity for Pestalozzi's next educational experiment. He was fifty-three years old when he opened the poor school at Stanz. At first he had no definite plan and allowed no helpers. He learned with the children and through observing them he humanized education.

At Stanz he developed further his look-and-see method, this time not just with children, but also with teenagers up to the age of fifteen. This experiment confirmed his belief that all education must be firmly founded on direct observation of the everyday phenomena in the immediate surroundings of the school.

There is no doubt that even at that early stage, Pestalozzi was convinced that empirical work was essential for fostering education. In a letter to his friend Gessner, he stated: "According to my experience, success depends upon whether what is taught to children commends itself to them as true, through being closely connected with their own personal observation and experience."[1]

Geography was part of Pestalozzi's education program at Stanz. It was a living geography in the field with personal experiment and observation. "I had gone rapidly through the scraps of geography and natural history in Gedicke's book. Before knowing their letters even, they could say properly the names of the different countries. In natural history they were very quick in corroborating what I taught them by their own personal observations on plants and animals."[2]

Not only was Pestalozzi engaged in fieldwork activities, but he had already outlined two distinct types of field exercises. Primarily, for the younger pupils, the look-and-see approach, and secondly, for the more mature pupils the verification of facts in the field. He was sure that "by continuing in this way, [he] should soon have been able not only to give them such a general acquaintance with the subject as would have been useful in any vocation but also to put them in a position to carry on their education themselves by means of their daily observations and experiences; and should have been able to do all this without going outside the very restricted sphere to which they were confined by the actual circumstances of their lives."[3]

Stanz was not the ideal location for an educational experiment. Indeed many factors militated against success: Roman Catholic antagonism towards the heretical Pestalozzi, combined with the enormity of his task, which he endeavoured to achieve alone, eventually caused the breakdown of his health. Consequently, when the military commandeered part of his school for a hospital, he closed down and retired to Gurnigel for convalescence.

(iii) Burgdorf

At Burgdorf, Pestalozzi temporarily abandoned his plan to uplift the poor to a position of self-respect in society, and turned his attention to defining and applying his method. As at Stanz, he resolved to utilize the primary sources, and avoid received opinion and second-hand information from books. In 1800, the Society of the Friends of Education sent a commission to report on Pestalozzi's institute at Burgdorf. In this report Luthi, the secretary, stated that Pestalozzi's method "...simply follows the path of Nature, or in other words, which leads the child slowly, and by his own efforts, from sense impressions to abstract ideas."[4]

Whereas at Neuhof and Stanz, Pestalozzi's work was experimental, he had now clarified his ideas of method and was in a position to teach it to others. This became the prime objective in his life, lest death might prevent the dissemination of his method all over Europe and the world. He enlisted the help of Krusi, Tobler, and Buss. This was his initial entry into training others. In 1800 Pestalozzi opened his first 'Ecole Normale' in the castle of Burgdorf. The normal school was a teacher training attachment to the regular school activities.

Burgdorf also witnessed the beginnings of a train of visitors, some merely sight-seeing, but others imbued with a desire to learn Pestalozzi's method. These disciples later spread his teachings throughout all parts of Europe and the New World. Just when his future seemed secure, a new revolution, bringing about the confederacy of Switzerland, left Pestalozzi again without a school. Burgdorf was thus a limited success. But Pestalozzi's method had proved successful. He was ready to enter the final phase of his work.

(iv) Yverdun

Yverdun opened in 1804, and was for Pestalozzi, the realization of his teaching method. The teaching patterns at Yverdun were a continuation of those begun at Neuhof, adapted at Stanz, and implemented at Burgdorf; yet Yverdun was different. While Yverdun was an education center for elementary and secondary pupils, it was, also, a normal school for teacher training. Pestalozzi followed the system begun at Burgdorf and the main teaching task was assigned to younger scholars, while he presided over the institute as a father figure. Moreover, some talented past pupils of Burgdorf became teachers at Yverdun, and thus carried on the methods by which they were moulded.

A student named Vulliemin, (later to become Professor Vulliemin) recounted his early geography learning at the hands of Pestalozzi. "We were first taken to a narrow valley not far from Yverdun, where the river Buron runs. After taking a general view of the valley, we were made to examine the details, until we had obtained an exact and complete idea of it. We were then told to take some of the clay which lay in the beds on one side of the valley, and fill the baskets which we had brought for the purpose. On our return to our castle, we... reproduced in relief the valley we had just studied....Only when our relief was finished were we shown the map."[5]

Often there were up to one hundred and fifty pupils present. At the same time many different nationalities were represented there including Prussian and other German states, Russian, French and English. The reputation of the institute was worldwide and the gradual dissemination of Pestalozzi's ideas came about by global cross-fertilization of teachers and ideas.

With little exception, the Renaissance idea was still percolating through educational themes across Europe, until the nineteenth century. In that century, both the theory and practice of geography education came together in Pestalozzi's institute and from there spread throughout the world.

The century also witnessed the development and spread of democracy. The universal uplift of the masses through education was closely linked with democratization, and this gave rise to the growth of the National Systems of education, from the elementary school state. Pestalozzi's method, therefore, was not only contemporaneous, but was also in harmony with the political climate in the Europe of his day.

The national systems of education began to emerge early in the nineteenth century in response to historical change, and many of the early teachers of those systems were trained at Yverdun. Thus, the look-and-see method, with its heuristic implications, was gradually incorporated into the educational systems of the developing European nations.

Prussia, having lost territory and prestige at Jena, was the first to adopt Pestalozzianism for the regeneration of its people. Frederick William the Third resolved to restore his country to its former position through universal education. He was influenced by his wife, Queen Louisa, who had read *Leonard and Gertrude* with enthusiasm, and, probably to a greater extent, by the philosopher Fichte.

Fichte had visited Yverdun as early as 1793, and subsequently had expounded Pestalozzi's principles in his own *Discourses to the German Nation*, which maintained that the regeneration of the people could only come about through universal education. Accordingly, Altenstein, a Prussian minister, wrote to Pestalozzi, expressing the wish that he might train two teachers in his method, at the very fountainhead. Eventually seventeen Prussian trainee teachers were sent to Yverdun; each spent three years there.

In the same way, Pestalozzi's method spread to Denmark and Holland. The different political entities which comprised Germany also chose the Pestalozzi method. It is no coincidence that at the close of the century, when these German states were united under one national umbrella by Bismark, that political achievement was made possible because of the educational foundation held in common by the different states.

In 1784, a German School teacher, Christian

Salzmann, was enthused by the new methods and ideas of Rousseau and Pestalozzi and carried out his own educational experiments. He sought a pupil that had not yet been influenced by traditional methodology. Carl Ritter, the pupil he found, was drawn instinctively to Pestalozzi when he grew up.

Pestalozzi's influence on Ritter did more for the development of geography indirectly than any direct experimentation he had performed. "Pestalozzi knew less geography than a child in one of our primary schools; yet it was from him that I gained my chief knowledge of this science, for it was in listening to him that I first conceived the idea of the natural method. It was he who opened the way to me, and I take pleasure in attributing what ever value my work may possess entirely to him." [6]

That statement is monumental when we consider that Ritter is now universally acclaimed as co-founder, with Alexander Von Humboldt, of modern geographical science. Ritter dedicated the first volume of his work *Erdkunde* (*General Comparative Geography*) to Pestalozzi. A constant visitor to Yverdun, he learned from first-hand practical experience, that precise knowledge of the world was to be gained only through direct observation of natural phenomena. Guided by this principle he became a teacher and philosopher of geography. Ritter began to apply the method to geography and abandoned the hitherto "compendium" geography for a living phenomenon based on personal observation and confirmation.

Ritter had learned to understand Pestalozzi's method which "based upon the nature of the child, develops so naturally and so freely."[7] He then applied it to geography where nature had been too long neglected.

Ritter later recalled "...I left Yverdun fully determined to keep the promise made to Pestalozzi of introducing his method into the study of geography, and already I am reducing the chaos to order; I hold in my hand as it were, the clue to such knowledge of the globes as will satisfy both the mind and heart."[8]

Ritter was a persistent and careful observer, and saw a coherence in the recurring patterns of geographical phenomena. As Professor of geography at Berlin, many great men of learning came under his direct influence. Among the pupils who made names for themselves were: the Swiss A.H. Guyot, who later as professor at Princetown did much to spread Ritters ideas in the United States; the Russians A.P. Jefrenof and P.O. Semenov 'Tanshansky', the former sometime lecture in Moscow university, the latter important as translator of Ritters work on Asia and for his work in the Russian Geographical Society and as an explorer; and most important of all, E. Reclus, the founder of the new geography in France. [9]

As the concept of universal education was adopted, the Pestalozzi look-and-see approach gained widespread usage. Germany became the template for other countries as Yverdun began to decline, from 1810 onwards. That guaranteed the perpetuation of the method that came to fruition at Yverdun.

CHAPTER THREE

THE SPREAD OF PESTALOZZI'S METHOD

Yverdun coincided with, or immediately post-dated, a number of major international movements. These aided the spread of Pestalozzi's ideas throughout the old and new world. Primarily the nineteenth century witnesssed a new definition of humanism in education. This new humanism became divorced from the church-dominated and Latinized humanities, and was orientated towards the utilitarian and scientific needs of the people. It implied "both a human and humane approach to educational problems: human in the sense that human nature and human interests should not be suppressed by religion ... humane in the sense that the nature of the child and its growing mind should not be suppressed by cruel school discipline and rigid methods of instruction." [1]

Added to this was the growing acceptance of the Baconian philosophy, incorporating the empirical component, which loosened the grip of the church on educational matters. Reflecting the new humanism, enlightened educators began to introduce a diversity to school curricula, both in subjects and methods.

Comenius' Pansophic ideal was closely linked with this new thinking and, indeed, the idea of education for the majority became firmly established. After Comenius, the humanistic tradition developed simultaneously on three fronts. The private academies of England [were] the best example of the new curriculum, the French movement of enlightenment led the way in secularisation and State intervention and the German-speaking reformers introduced the new methods. [2]

Like Pestalozzianism, political democracy had its roots in Switzerland and had a profound effect on the philosophies of the nineteenth century. Both democracy and universal education were phenomena peculiar to that century. In many ways the dissemination of Pestalozzi's principles at once aided, and in turn, was aided by the widespread acceptance of this new form of government.

In America, democratic ideals and educational development went hand in hand. Geographically, each settlement was an isolated nucleus, on the fringe of a huge landmass. It followed, therefore, that each unit had to be self sufficient in terms of government, livelihood and education.

The spread of democracy and the principle of universal, compulsory education in America were in harmony with Pestalozzi's principles and, therefore, his method was accepted in the new world.

(i) Pestalozzianism in America

Pestalozzi's ideas were also disseminated through the alliance of the scientific utilitarians and the Free Masons. This arrangement further weakened the position of the church in education and afforded an international cohesion for the widespread dissemination of new methods. Developed in England in the seventeenth and the beginning of the eighteenth centuries, the theory of secular scientific education was disseminated in France and America through Masonic circles and found its practical application in the secularisation laws of Europe and the legislation of the American Revolution. [3]

The important people involved with the development of secular education in America, at a time when colonial links with both England and France were particularly strong, were indeed Masons, -- Benjamin Franklin, Thomas Paine and Thomas Jefferson.

There would appear to be no coincidence, therefore, in the fact that Philadelphia, where Franklin set up the first Freemasons Lodge in 1726, was to be the center of the American diffusion of Pestalozzi's method under Joseph Neef, less than a century later.

Joseph Neef had joined Pestalozzi at Burgdorf around the year 1800. Because of his familiarity with the French and German languages, Neef was chosen by Pestalozzi to open a school in Paris, to be conducted on his mentor's principles. It was there, in 1804, that a chance encounter with William McClure, who was in Paris settling the claims of American citizens against the French Government for "spoliations committed during the Revolution,"[4] resulted in his sojourn in the United States. Neef outlined the circumstances of his encounter with McClure and demonstrated how the latter was impressed with the Pestalozzi method from the very onset. As soon as he had returned to Paris, Mr. McClure sought and sent for Neef. "On what terms," said the magnanimous patriot, "would you go to my country, and introduce there your method of education? I have seen Pestalozzi, I know his system; my country wants it and will receive it with enthusiasm. I engage to pay your passage, to secure your livelihood. Go and be your masters apostle in the new world." [5]

Thus was Neef persuaded to spread the Pestalozzi method in America, despite the fact that he knew no English.

When Neef eventually set up the Pestalozzi Institute in Philadelphia, there is evidence that he ran it along the lines of his master. A contemporary who lived at the school for four years said that

> During this period I saw no book, neither was I taught my alphabet. The chief subjects taught us orally, were the languages, mathematics, and the natural sciences; and the idea was to make us understand the object and application of all we learned...Our outdoor life was equally curious. We never wore hats, winter or summer, and many of us went barefooted also during the warm weather. Our master, hatless as ourselves, would lead us on long tramps through the adjacent country, talking as we went, upon agriculture, botany mineralogy and the like, in a pleasant, descriptive way, and pointing out to us their practical illustration in the grain fields, the gardens, the rocks and streams along our route. And wherever we came, we were always recognised by our bare heads and hardy habits as the Neef boys from the Falls.[6]

This cooperation between Maclure and Neef lasted for many years, Maclure providing the financial backing for Neefs educational endeavour. As a result, Neef was the first man to write a pedagogical work in English in the new world. Its title, though long-winded, bore evidence of Pestalozzi's influence on him. ***Sketch of a Plan and Method of Education founded on the Analysis of the Human Faculties and Natural Reason, suitable for the offspring of a Free People and for all Rational Beings.***[7]

Printed in 1808, the book dealt with all the subjects which he had already taught at Burgdorf, and outlines Pestalozzi's method for each individually.

Although Neefs school enjoyed considerable initial success, after three years, it was moved to the country in Delaware County, and began to wane. The major controversy, religious antagonism, re-echoed that of Yverdun. Accusations of atheism were popular and the damage was total. Eventually Neef was forced to close his institution, and Maclure again stepped in to persuade him to teach the Pestalozzi method at 'New Harmony.'

Other individuals also introduced Pestalozzianism into the United States. W. E. Woodbridge, a pupil of Ritter who had personal contact with Pestalozzi, was responsible for introducting the new geography into the United States.

After Pestalozzi's death the only means of teaching his method were second hand from Prussia, France and England. Henry Barnard arrived in Europe after Pestalozzi's death. He was the most active Pestalozzian of the generation. His articles on the method and his translated selections of Pestalozzi's writings were collected in his book *Pestalozzi and Pestalozzianism* (Syracuse, 1859). It was the most widely used handbook on the subject in English for a long time, though the information it provided was second-hand, and even the translations were taken over from other authors.

Barnards contribution to American educational reform began with his secretaryship of the new State Board of Commissioners of Common Schools in Connecticut. In the struggle for reform, he was forced to change to Rhode Island where he became the first Commissioner of Common Schools. Because of his eclectic policies in Europe, he initiated and maintained a number of educational journals, in which he expounded his reformative principles. Articles on methodology and curriculum also appeared in these publications, and in this way he insured a considerable scholastic pressure on the school authorities and the general public.

Barnards fellow-American, Horace Mann, set about reforming the educational structures and content in the State of Massachusetts. He was also an indirect disciple of Pestalozzi, and was unceasing in his efforts to persuade the American legislators to adopt the favorable aspects of the Prussian and other European systems.

Consumed with the improvement of education in the United States, Mann undertook a journey to Europe in the early 1840s, at his own expense. Having compared the National systems of many countries, he borrowed the points which he judged most favourable for the United States. He gave a full, personal account of his itinerary in the ***Report for 1843 of the Secretary of the Board of Education of Massachusettes***.

> "In my travels, I visited England, Ireland, and Scotland; crossed the German Ocean to Hamburg; thence went to Magdegurg, Berlin, Potsdam, Halle, and Weissenfels, in the Kingdom of Prussia; to Leipsic and Dresden, the two great cities in the kingdom of Saxony; thence to Erfurt, Weimar, Eisenach &c, on the great route from the middle of Germany to Frankfort on the Maine; thence to the Grand Duchy of Nassau, of Hesse Darmstadt, and of Baden; and after visiting all the principal cities in the Rhenish Provinces of Prussia, passed through Holland and Belgium to Paris."[8]

Mann, therefore, had first-hand knowledge of the success of Pestalozzi's methods in a wide spectrum of European schools. He returned to the United States well equipped to carry on the struggle for reform and spread the new methods. His summary of the educational situation in Europe in the mid 1800s indicated that the Renaissance idea still predominated despite isolated pockets of educational advancement. The struggle for secular control of education -- National Systems -- was still being waged by the enlightened minorities. In many places the classical education, under religious domination, was still a way of life. It was equally obvious that Paedocentric education was not the general rule, while rote learning and liberal abuse of corporal punishment was still widespread. On the other hand, the air of change was perceptible in institutes where humane and human education was being conducted in a modern scientific atmosphere of child-centered curriculum.

Mann advised the members of the Massachusettes board to study his report and indicated that it was his belief that all that was foreign was not necessary good or proper for the United States. "On the other hand," he said, "I do not hesitate to say, that there are many things abroad which we at home, should do well to imitate."[9]

It transpired that Mann was most impressed with the educational system in Prussia. He initially outlined the faults of the system, as he saw them, then he enumerated the advantages of judiciously borrowing the aspects which would suit the American life. "The evils imputed to it were easily and naturally separable from the good which it was not denied to possess," Mann wrote. "If the Prussian school master has better methods of teaching reading, writing, grammar, geography, arithmetic, &c., so that, in half the time, he produces greater and better results, surely we may copy his modes of teaching these elements, without adopting his notions of passive obedience to government, or of blind adherence to the articles of a church." [10]

Mann devoted numerous pages to his description of the teaching of geography in the Prussian educational system. He was, in fact, restating the Pestalozzi methodology, with all the inherent heuristic facets. It was obvious that even in 1842 Ritter's fame as a geographer was widespread and that particular science was flourishing throughout Germany. "The practice seemed to be uniform, however, of beginning with objects perfectly familiar to the child- - the school house with the grounds around it, the home with its yards or gardens, and the street leading from the one to the other," Mann wrote. "First of all, the children were initiated into the ideas of space, without which we can know no more of geography than we can of history without ideas of time. Mr. Carl Ritter of Berlin -- probably the greatest geographer now living -- expressed a decided opinion to me, that this was the true mode of beginning." [11]

In his efforts to reform the educational structure of the United States, Mann expounded the Pestalozzi method and in his capacity, as secretary to the Board of Education of Massachussets, held great sway over the system that was eventually adopted. The discovery and look-and-see approaches were incorporated into the system from the outset.

Neef had his establishment in Philadelphia; Barnard in New England; Mann conducted his educational reforms in Massachusets; and, finally, another movement which was firmly rooted in the Pestalozzian principles, was Dr. E.A. Sheldon's Orphan and Free School in Oswego, New York. Sheldon came under the influence of the Mayos, who were ardent disciples of Pestalozzi, having spent the best part of three years at Yverdun (1819-22).

Sheldon imported from London a teacher trained in the Pestalozzi method, for the purpose of training other teachers in that same method, and thus providing a pool of well-trained teachers to propagate the methodology. Consequently, Oswego became one of the State Normal Schools of New York from which Pestalozzianism spread through the country. [12]

The Pestalozzi method was systematically and designedly expounded in the United States till the twentieth century, through Miss Jones and her successor -- Hermann Krusi Jun. (1817-1903) -- son of Pestalozzi's first assistant. The latter was responsible for teaching the look-and-see method to several generations of prospective teachers in the Oswego State Normal School. The heuristic tradition was therefore incorporated into the American educational system. It influenced men like Dewey, whose Project method, in turn, incorporated many of these discovery and adventure techniques.

Events were to occur, however, that would militate against the growth and development of geography education in a young country grappling with major national issues that regrettably kept the focus of progress away from geography.

(ii) Pestalozzianism in Great Britain

Pestalozzi's ideas spread to Great Britain, but were never accepted as a viable educational endeavour by the majority of those who were involved in the provision of education. It was Pestalozzi's express wish that his method should be firmly established in schools throughout Great Britain before his death. Concerning that very matter, J.P. Greaves, who was visiting Yverdun at the time (1818), wrote to Lord Liverpool, the English Prime Minister, that Pestalozzi "sighs ardently that what he has been devoted a life to should be transplanted to the English shores."[13]

Greaves argued ahead of his time when he advocated a National System organized on Pestalozzian principles. He urged Lord Liverpool to accept the methods which he had discovered at Yverdun and adapt them to the English schools.

Besides Greaves, who was but a lone voice, there were many other individuals who endeavoured to introduce Pestalozzi's teaching principles into their schools in Great Britain. Many of these had been to Switzerland and had learned the new method at the fountain head. They were enlightened educators who understood that Pestalozzi's system amounted to a revolution in methodology. It was unfortunate, however, that at the time when English people began to visit Yverdun it was already experiencing decline due to internal visissitudes and rivalries.

The first to expound Pestalozzi's ideas in Great Britain were female writers -- Mrs. Elizabeth Hamilton, Maria Edgeworth, and Mme. de Stael. Edgeworth and de Stael were working from direct experience, since they had spent some time at Yverdun, and were ardent disciples of Pestalozzi.

M.A. Julien, the first comparativist, was also a supporter of the method and translated many of Pestalozzi's works into English. The linguistic barrier having been eradicated, Pestalozzi's ideas began percolating into the English system. W. H. Ackerman had two years teaching experience at Yverdun and was the first to teach the look-and-see approach in England in the Lancastrian and National schools. It was as a direct result of his exploitation of the Pestalozzi method that Dr. Bell, the noted English educator, was persuaded to visit Yverdun in 1816.

Henry Brougham and William Allen also visited Pestalozzi's institute in 1816. The internal strife, however, tainted their impressions of the method and they came away with the decided opinion that his former colleagues institute (Fellenberg's) was more educationally sound. On the other hand, Brougham realised the outstanding potential of the Pestalozzian ideas -- which were the basis of Fellenberg's institute in the first place -- and attributed Pestalozzi with being the first to utilize the monitorial system at Stanz before either Bell or Lancaster.

In 1818 Robert Owen visited Pestalozzi's institute at Yverdun. Owen had already developed his own educational scheme in Scotland for the education of the masses, similar to, but independent of, Pestalozzi. Like Bell before him, Owen was too consumed with the excellence of his own system and its dissemination to appreciate that of Pestalozzi, and the visit accomplished very little.

Dr. Charles Mayo was first introduced to the ideas of Pestalozzi by John Synge. An ardent exponent of the new principles, Mayo gave up his position as headmaster of Bridgenorth Grammar School to visit Yverdun between 1819-1822. While there, he became thoroughly familiar with Pestalozzi's method and accompanied the pupils on their exploratory excursions into the local environment.

On his return to England Mayo did much to promote the new education. He approached influential men in the government and urged them to adopt the method. Then he set up a school in Epsom which was run on the principles of his former master at Yverdun. He achieved such success at this venture that he was forced to move to Cheam for organizational matters. Here he imported teachers with direct and practical experience from Yverdun --J. Heussi, Thomas Lutener, C. F.Wurm, and Hermann Krusi Jun., and insured the efficient undiluted, method. The school became one of the best preparatory colleges in the country. Dr. Mayo also supported the teacher training college which was set up by the Home and Colonial School Society in 1836 in order to show the application of Pestalozzianism to elementary education.

Despite these isolated pockets of Pestalozzianism, his method did not attain the widespread acceptance in

Britain that it did in other parts of Europe and the new world. In hindsight, the reasons are obvious.

Yverdun was primarily a teacher training institute supplying teachers to schools in many countries. It was an independent establishment with educational methodology as its primary goal. In Britain, at the time, there existed no independent teacher training colleges. In 1840, Dr. Kay tried to remedy that situation. He opened an institute in the old manor house at Battersea. Kay's experiment was a direct result of his experience on the continent. "In company with Tufnell, Dr. Kay visited the continent and was so impressed by the schools of Holland and Switzerland that he became convinced that he was on the right track. He was specially interested in the educational developments which owed much to the influence of Pestalozzi and Fellenberg, and incorporated much of the experience he gained into the organisation of the Battersea college." [14]

When that college was handed over to the National Society in (1843), signifying the failure of Kay's experiment, it heralded the end of Pestalozzianism in Britain. Religious antagonism was the rock on which the experiment foundered. The nonconformists in opposition set up their own teacher training colleges, and thereafter control of these institutions was dominated by one sect or another. Consequently, methodology was not a prime issue where denominational dogmas and doctrinal indoctrination constituted a major portion of the teachers' training.

Britain, unlike Prussia, did not at the time possess a

National System of Education. For this reason, Pestalozzi's principles could not be easily implanted and universally adopted. Instead, education was in the hands of various voluntary organizations and private individuals, the National Society and the British and Foreign Society all of which had their own denominational educational pursuits. Pestalozzi therefore had little chance of success.

Eventually, in 1870, when the government made a first cautious entry into the educational world with Forsters Elementary Education Bill, it was too late and too feeble to encourage the spread of Pestalozzianism in Britain. Designed to 'fill the gaps' it had the desired effect by creating a situation whereby the various denominational sects were stimulated into providing by 1880 "over a million school places in addition to those which existed in 1870." [15]

Methodological debate receded to the background during the initial period of establishing the National System on the ground. For the next two decades, interest centered on making elementary education free and compulsory. [16]

The adverse effects of the Revised Code introduced by Robert Lowe in 1862 further militated against innovation in curricular content at the elementary school level. Introduced as an economic measure in the wake of the Crimean War, the Revised Code tended "to discourage attention to the higher branches of elementary instruction: Geography, Grammar, History."[17] On a comparative note, Kay Shuttleworth described the British school as "a scene of mechanical drudgery, quite unlike the work of the best Swiss, Dutch, and Prussian schools." [18]

The Revised Code, therefore, had a detrimental effect on education in general, but in particular it impeded the spread of Pestalozzi's method to British schools. Instruction, for the most part was confined to the "3 Rs" and in many cases geography was ignored altogether.

J.F. Herbart, the renowned educational psychologist, was a pupil and a disciple of Pestalozzi. Ironically, he was another reason for the failure of the new method to attain universal acceptance in Britain. Towards the end of the century the growth of nationalism in European nations meant that Herbartian philosophy tended to eclipse that of Pestalozzi's. Inductive methodology incorporating personal investigation and discovery was out of harmony with the ideals of political science and the growth of nationalism.

It was for these varied reasons, that the principles of Pestalozzi's method achieved no lasting success in 19th century Britain. Geography, and in particular, field work methodology in the teaching of geography, blossomed and flourished as a result of the Royal Geographic Society and the enlightened academics and professional geographers who took it to the teachers and schools.

(iii) Pestalozzianism in Ireland

The pattern of events concerning the spread of Pestalozzi's method to Ireland, was a mirror image of that in Britain. Various individuals went to Yverdun, were impressed and resolved to propagate his principles on their return to Ireland. But as control of teacher training became the prerogative of denominational bodies, Pestalozzianism could not be adopted by the National School Board after 1831.

Prior to 1831 the **Kildare Place Society** was an independent experiment incorporating many of the principles of Pestalozzi. But when Religious acrimony caused that experiment to fail, the new method was abandoned.

John H. Synge (1788-1845) was persuaded to visit Yverdun during his European Tour in 1814. "He had meant to spend two hours there and, instead, he stayed for three months, making himself familiar with the new principles of teaching in order to bring home as much as possible of what appeared so intrinsically valuable."[19]

Synge, therefore, learned at the source the heuristic techniques of the look-and-see approach, and, subsequently, on his return to Ireland in 1815, he established a school on his father's estate in Roundwood, Co. Wicklow. There he experimented with education based on the Pestalozzi principles and practical work on the land was carried out in the school environs. His was an early example of utility education incorporating human and humane ideas, with a bias on the practical side of the curriculum.

A neighbour of Synge, Lord De Vesci, Second Viscount of Abbeyleix, obviously influenced by Synge, also adopted the Pestalozzi method and became an ardent disciple of his ideas. After a sojourn at Yverdun, Lord De Vesci opened a school on his estate in which the teaching was conducted along Pestalozzi lines.

Despite the individual efforts of these experimental educators, Pestalozzi's principles were totally eclipsed by the religious controversies that stifled 19th century educational endeavour in Ireland.

Pestalozzianism spread all over Europe and his methodology followed the frontier in North America and became accepted classroom practice as the territories were settled. Pestalozzi influenced the world of education in his own day, and continues to do so today, in every school where the look-and-see approach to geography education is being conducted.

CHAPTER FOUR

THE ECONOMIC DYNAMIC: BRITAIN IN THE NINETEENTH CENTURY

(i) Laissez-faire philosophy and fieldwork in Geography Education

In early nineteenth century England the philosophy of the government was Benthamite--laissez-faire, with strong utility overtones. Jeremy Bentham, an English Philosopher, was the father of Utilitarianism, which held as its doctrine that the goal of life is the greatest happiness of the greatest number. The Utilitarian Society was founded in 1823 and became a powerful center of liberal thought, bringing about many reforms. Adam Smith, the Scottish economist was an apologist for *laissez faire* thought - which holds that government should not interfere with decisions made in an open, competitive market. This defense of *laissez Faire* philosophy suited the needs of a rapidly developing industrial economy.

This accounts for the government's tardy and tentative approach to universal education. It was not until 1833--one year after the first Reform Bill -- that the government made its first niggardly gesture towards aiding the existing educational institutions engaged in providing elementary education in the "3R's" for the poor. That year the government allocated $20,000 for grant aid in support of the monitorial schools run by the National Society (Bell), and the British and Foreign Society Schools (Lancaster). Though the grant was increased over the years, it was 1870 before the government moved definitely towards establishing a national system of education.

As the nineteenth century progressed, the efforts to provide elementary education for all became more definite and widespread.

Geography, however, was rarely on the school curriculum; a curriculum that was limited to the bare essentials. In schools where geography was a part of the pupil's instruction, methodology was usually confined to rote learning and map pointing. In the early stages innovations in methodology were eclipsed by the need to build schools and teach the "3 R's." Indeed, many politicians and church leaders of the day were convinced that a minimal degree of literacy and religious knowledge was more than ample education for the poor, lest they become unhappy with their position in life.

Other factors, also, militated against the acceptance of geography and the heuristic approach during the early years of the nineteenth century. The teacher training institutions were all under church control and consequently the inductive method was frowned upon in favour of rote learning and indoctrination. This was a pattern peculiar to all clerical institutions involved in the training of teachers--training with the twin objectives of providing a literate mass to support and propagate the religious body. The inductive method was anathema to those objectives, since it created thinking minds, and, therefore, people who tended to question the foundations of the creed by which they had been taught.

The position deteriorated after the introduction of the Revised Code (1862) which initiated the system of 'payment by results.' Robert Lowe, Vice President of Education, promised that "If it is not cheap, it shall be efficient, if it is not efficient, it shall be cheap."

It was cheap. It had a severly detrimental effect on education reform for many years. Since teachers' salaries depended on the number of pupils in each class that passed the examination in the "3R's", it followed that large classes were taught using memory and rote learning techniques.

Geography, for the most part, was not taught at all, and where it was, learning took the form of long lists of capes and bays which had to be rote learned by the pupil who usually had no idea what they entailed. Geographical field-work had no place in such an approach.

Nevertheless, there were individual cases where geography was not only an important subject on the school curriculum but, in addition, field-work methods were used and the look-and-see approach advocated by Pestalozzi was in vogue. This was true of some schools even before state aid was forthcoming. Some of these were also influenced by Rousseau, while others got their impetus for experiment and innovation from men associated with the various *'lunar Societies.'* These were gatherings of intellectuals that met once a month on the night of the full moon- -an expedient use of light for making one's way home at night. The inductive method in geography education fitted in with the general philosophy of practical utility, which was the hallmark of these institutions.

Thomas Day's book, for instance, *Sandford and Merton,* which was written to popularize Rousseau's educational method, contained many passages of inductive geography work. Day was a typical nineteenth century *'Lunar Society'* product. He applied the 'new' methods to geography instruction while restating Rousseau's philosophies. Day's character in *Sandford and Merton* was Tommy Merton and he like Emile received a practical schooling by utilising the heuristic approach. "...Tommy Merton learns to work on the land, goes botanising, visits a windmill to see how it works..."[1]

Day, therefore, incorporated in his geography education the principles of Pestalozzi's look-and-see approach. Day's significance as an educator was in his influence on men who read his works later in the century.

Other small-scale individualistic approaches to education showed similar enlightenment in that they also utilised sound field-work methods in the study of the natural environment. Mary Anne Galton, describing her early education, referred to her father's delight in teaching her science and natural history, both in his laboratory at home and during walks in the country and at the seaside, where "everything around furnished new materials for knowledge and for scientific exploration."[2]

Joseph Priestley joined the staff of Warrington Academy in 1761, where he "pioneered the use of biographical and historical charts, and was interested in the use of models and other aids in the teaching of history, geography and other subjects."[3]

Priestley was one of the first men to link geography to commerce in a practical way that involved imperialist expansion.

> ... I would advise that more attention be given to Geography than I believe is generally given to it; particularly to ....commercial geography, exhibiting the state of the world with respect to commerce, pointing out the most advantageous situations for carrying it on; and more especially noting those articles in the Natural History of countries which are, or may be, the proper subjects of commerce. This branch of knowl-

> edge is as yet very much confined. We are probably strangers to some of the most useful productions of the earth on which we live, but a general attention once excited to the subject by teaching it to youth in all places of liberal education would be the best provision for extending it....a knowledge of chemistry is absolutely necessary to the extension of this useful branch of science (commercial geography). [4]

With his remarks on geography in education Priestley thus anticipated the mood of the following century in commercial exploration and exploitation.

Between 1815 and 1825, geography was not only included on the school curriculum, but field-work was carried on at Hill Top and Hazelwood Schools by Thomas Wright Hill and his sons Mathew Davenport and Rowland Hill. In their work "a ground plan of the room being drawn upon the floor, the pupils are desired to point out upon it the door, the walls, etc. The plan drawn by the teacher is then rubbed out and each boy constructs one for himself..." [5]

Here was a meaningful learning experience that went from the familiar to the unknown and from the particular to the general. These sound educational principles were further enhanced by an outward concentric progression from a study of the local area, to a study of Britain, Europe and the other continents.

Though geography and field-work appeared to be on a firm educational footing in the instances mentioned above, these were isolated cases where the influence of enlightened individuals was at the forefront. In reality the general picture was much different. Whereas in Germany and other parts of Europe, the methods of Pestalozzi incorporating the 'heuristic' approach were adopted and spread rapidly, the circumstances which favoured this state of affairs were not present in Britain.

Pestalozzi's methods utilized the platform provided by the national system in Prussia and were established in every school, while in Britain there was no real effort to establish a national system until 1870. Even then, the Government indicated that it was not interested in interfering with the status quo. The *Education Act of 1870* allowed the voluntary bodies a six month period for 'filling the gaps.' So education for the most part continued to be dominated by the clerical institutes and concentrated only on the "3 Rs". In elementary and secondary school education, geography, and in particular geographical field work, played no important part throughout the century.

Meanwhile, the economic dynamic involved in Imperial expansion was affecting geography at a higher level. The key agency in this sphere was the *Royal Geographical Society* which directly linked the significance of imperial expansion overseas to economic well-being at home. Burton's journey to Mecca and his attempts to find the source of the Nile were intrinsically linked with enhancing the economic value of these Imperial territories with the growth of British mercantilism. In Africa, for example, with the British Empire established in the north of the continent in Egypt and in the south of the continent in South Africa and Rhodesia, the economic vision was to link the two ends of the continent with a railway system and possibly a water system.

The Royal Geographical Society used direct discovery methods in the field at first, but later when exploration was seen to be drawing to an end, the same inductive techniques were applied to geography instruction in the universities and schools. It was at this level that geography education would receive new purpose; a purpose that would derive inspiration from Pestalozzi, Rousseau and all the great educators, back to Aristotle, and eventually bring about a situation whereby every pupil in every school in the country would study geography in nature's true laboratory.

(ii) The Royal Geographical Society

Exploration

In 1830, three years prior to the government's tentative entry into education, the *Royal Geographical Society* was founded by members of the Raleigh Dining Club, who had collectively visited nearly every part of the known world. The Society was a direct follow-up to the *African Association* and was equally dedicated to the promotion of exploration on that continent as well as elsewhere. The Society's initial years coincided with such great names in exploration as Livingstone, Burton and Speke. "During the years of Murchison's supremacy the Society had been growing rapidly in numbers, wealth and influence... Unprecedented activity in the field of exploration gave keen interest to the evening meetings when men like Livingstone, Burton, Speke, and Eyre were laying bare the age old secrets of hitherto unpenetrated continents. So great was the attendance that the seats of the Council had to be kept by policemen to prevent them from being rushed by the crowd of Fellows and their friends."[6]

This close connection between exploration work--where the methods of observation, recording and deduction were utilized on sound scientific principles, and the Society's day-to-day work at home, ensured the passage of those methods into the sphere of education in due course.

Geography received a new impetus at the hands of the Society. Applied geography became directly concerned with the discovery, production, transport and exchange of commodities as sources of profit for the home companies. Special geographic courses were organized for persons intended for the colonies, courses in which the heuristic element predominated.

Initially education was not a concern of the *Royal Geographical Society*. Indeed the increased volume of correspondence and other work which resulted from the exploratory missions to the African continent and elsewhere, as well as maintaining a smooth operation at home, usurped the organizer's time. It was inevitable, however, that the question of geography in education would arise because of its neglect in the educational system of Britain--a neglect which contrast with France and Germany highlighted.

As far back as 1820 a chair of geography existed at Berlin University. There is every indication that Germany influenced England in the area of geography education. The University of London incorporated many of the modern aspects of educational science derived from German institutes, in particular from Berlin. Indeed the University of Berlin was the prototype for scientific utility education and the University of London, influenced by Thomas Campbell's observations at Berlin, conformed in most aspects to the new curriculum.

It was not surprising, therefore, that in 1833 London University approached the *Royal Geographical Society* with this formal request:

> Received a communication from the Secretary intimating that the University of London was about to establish a Professorship of Geography and that it had been indirectly intimated to Captain Beaufort that if the Society would bestow a small endowment on the Chair the nomination of the professor would be ceded to it, to which, he, the Secretary, in concurrence with Captain Beaufort had replied that the funds of the Society were inadequate to such a purpose, especially as such a concession to one of the Metropolitan Colleges would warrant a similar claim from the other. Approved.[7]

Ironically, though the University of London's request to the Royal Geographical Society for financial assistance to establish a Chair of Geography had been turned down on the advice of Captain Maconochie, that same man became the first professor of Geography in the U.K. when in 1833 he accepted the post on the invitation of the University of London authorities. His appointment was a milestone of great significance to geography education.

In the first place, since the University of London was a degree-granting body and geography was recognized as an academic science, there was now an incentive to work towards a qualification. Secondly, Maconochie's appointment maintained the close link with exploration and discovery by sea, and perpetuated the practical, inductive method in the field.

Thirty years elapsed before the next professorship was set up in 1863, again at the University of London, King's College. W. Hughes was appointed and held the position for thirteen years. This was one year after the introduction of the Revised Code, which did so much to prevent any development of geography education in grant-aided schools. Thus while geography education was stultified at the lowest level of schooling, there were indications of a significant advance at the uppermost level.

The negative approach towards the provision of assistance, either financial or moral, remained the policy of the Society for the greater part of the century, with little exception. The watchword of the Society then, and for many years, was 'Exploration not Education.' [8]

(iii) The royal Geographical Society

Education

Between the years 1830, when the Society was founded, and 1884, when John Scott Keltie was commissioned to undertake a fact-finding mission into the state of geography education in Britain and the continent, there came about a gradual change in emphasis from the world of exploration to that of education. Many reasons may be attributed to this turn of events.

On the continent geography education was in a very strong position both in the universities and in the schools. Under the influence of Ritter and his pupils, geography was well established in Germany, while in neighboring France, Elisee Reclus, a disciple of Ritter, together with Vidal de la Blanche, had put geographical education on an equal footing with the other disciplines and sciences.

On a global outlook, a greater volume of geographical knowledge, resulting from the opening up of both the new world and the interior of Africa, was available than ever before. The time was ripe for a greater involvement of geography in education, especially in Britain where so much of the exploration and discovery originated. Likewise the heuristic method was increasingly adopted, especially among the enlightened minds of the educated. Darwinian influence after the 1850s did much to enhance this position, since all the latter's theorizing resulted from first-hand observations and recordings made in the field.

The Royal Geographical Society reflected these changes in attitude towards exploration and education. The old view that [the Society's] scope was limited to the promotion of exploration and the reward of discovery was being attacked by the more progressive members, Mr. Galton and Mr. Freshfield prominent among them.[9]

These two young galants were untiring in their efforts to improve the plight of geography education in the schools of great Britain. In spite of the Crimean War and the Revised Code that resulted, Freshfield persisted in his plan and was instrumental in acquiring a thorough enquiry into the whole question of the teaching of geography at home and abroad. In response to an advertizement for an Inspector of Geographical Education, Mr. John Scott Keltie was appointed in 1884.

Keltie's appointment was particularly fortunate because he exercised a sound eclectic approach to the situation both at home and abroad. He was instructed to visit Germany, Austria, France, Switzerland, Italy, Belgium, Holland and Sweden and to make inquiries by correspondence as to the state of geography in America. He was authorized to collect from every country characteristic textbooks, maps and appliances of every kind for the teaching of geography. These instructions he carried out with alacrity.

Keltie's study revealed the incredibly poor state of geography education in Great Britain. In contrast with the other European countries, Britain was by far the worse off in terms of equipment, commitment and method. He discovered that field-work techniques were a major part of geography instruction in the schools of Switzerland, Germany, Holland and other countries. In these places provision was made for geography to be learned in the true laboratory--outside the school classrooms. Teachers were trained in the ability to instruct using the scientific approaches to field work methodology. As a result, standards in these countries contrasted favorably with those in Britain.

The publication of Keltie's report marked a new era in the development of geography education in Great Britain. As an academic discipline, it would receive its proper status and field work-would be accepted as the methodology for proper instruction.

Reforms were the immediate objectives. The council of the R.G.S. embarked on a campaign against the existing institutions to bring about these reforms. It was understood that if Oxford and Cambridge established Chairs of Geography then, teachers could be properly trained and the reforms would eventually spread to the schools. The pyramid idea was simple but ingenious. In this way the new geography was introduced at the top, so that it could percolate down to the second and elementary levels of schooling.

Most of the early academic geographers were recruits from other branches of science, especially geology and botany. They brought with them the heuristic approach inherent in the study of their former disciplines. Introduced at the very beginning as an accepted teaching method, that approach incorporating field-work techniques developed in unison with the mainstream of academic geography.

The report of Keltie's findings therefore initiated reforms in geography education at third-level institutions. One of the first results of his report was the delivery of lectures on geography by General Strachey at Cambridge, and the appointment of Mr. Mackinder to a readership in geography at Oxford.

Once the pattern was established other universities appointed readers and professors of geography. Courses of study leading to degrees in geography were inaugurated. H. Yule Oldham opened a School in Manchester University in 1892, and before the turn of the century similar establishments were set up at the London School of Economics, and at the University of Reading. Mr. P. M. Roxby became assistant lecturer in geography at the University of Liverpool in 1905 and two years later H.J. Fleur was appointed lecturer in charge of the subject at University College of Wales, Aberystwyth. The Universities of Sheffield and Edinburgh followed in 1908 under the headships of R.N. Rudmose Brown and G.G. Chisholm, respectively.

In time, the majority of universities and colleges came to offer geography courses. Diplomas and pass degrees were granted from the beginning, but honours courses and degrees were not initiated, for the most part, until after the first World War when geography took on a more prominent role.

(iv) Field-Work at University Level

Mackinder

Oxford University was the first to have a readership (1887) and a department in Geography (1899). Mackinder was 'the right man' as Keltie himself asserted in his review of the thirty years progress.

> Oxford was tackled first, and fortunately the right man was available to make the appeal effective, to obtain recognition of the subject as a serious study in the curriculum of the University. I need hardly remind you how much we owe to Mr. Mackinder for the strenuous and successful efforts he made, as the first Reader in Geography, to secure for the subject a worthy place among the University studies. Not only in the University, but elsewhere, by lecturing and writing, and in other ways, he drew wide attention to the subject, and helped greatly to break down the prejudice which existed against geography, as unworthy of serious attention. [10]

Mackinder epitomized the link between active explorer and academic geographer. He was not initially trained as a geographer yet he proved that he had the same spirit of exploration and adventure which dominated men like Livingstone, Burton and Speke. In 1899, he successfully organised an expedition to conquer the then unclimbed Mt. Kenya, a 17,000 foot volcanic peak in East Africa. His enthusiasm and drive were equally evident in his academic duties notwithstanding that his task was enormous.

> We were in a vicious circle. On the one hand students came up to the University without the preliminary knowledge to

> benefit by a University study of geography: on the other hand, the University did not send out teachers of geography to the schools. The Royal Geographical Society, as the result of Dr. Keltie's report, determined to break the circle so far as the old Universities were concerned, by using the comparative wealth at its disposal. At first we had to teach at the Universities what should have been taught at the schools. But even prior to that, we had to attract a class of some description or any description. In my first term as Reader at Oxford, I lectured to two ladies and a Don. The Don told me that if he knew anything he knew his Switzerland, for he had just read Baedeker from beginning to end. The two ladies brought their knitting needles and their baskets. I put on a small fee, and the knitting needles disappeared. When I left Oxford some eighteen hundred undergraduates had passed through the geographical classes, and in addition a number of ladies from the Ladies college.'[11]

The impetus for innovation and experiment came from above. In 1893, at a meeting of Public School masters, held at Christ Church, Oxford, the *Geographical Association* was founded. The relationship between the Society and the Association began when The *Royal Geographical Society* had sent Mackinder a letter which they had received from Mr. B.B. Dickinson of Rugby, suggesting that "a collection of geographical lantern slides should be formed for loan to schools. Thus the Association was brought into relationship with the Oxford Readership in Geography, and the connection became a closer one when the classes of the Reader grew to be the School of Geography."[12]

It was significant that both the *Royal Geographical Society* and the *Geographical Association* were so closely linked in their proposed direction for geography education in schools from the beginning. The question of the preparation and distribution of lantern slides was a form of field excursion in which the pupils received vicarious experience without having actually undertaken any field-work themselves. The teacher, as explorer, actually did the field work and then presented the findings to the pupils as a teaching technique. This was a remarkable achievement in the close of the nineteenth century when there was a marked scarcity of geography teachers and field activities were little known.

Initially, the ranks of the *Geographical Association* were filled exclusively by public schoolteachers and continued in that manner for some time, despite the efforts of the founding member Dickinson, to widen its scope in 1899. But as geography began to take its place in the curriculum of the universities and teachers trained in the art of geography education began to filter down into the system, changes were bound to come. One man in particular Andrew John Herbertson was responsible for much of the improvements and innovation that came about from the turn of the century to the First World War.

(v) Vacation Courses

Herbertson

Andrew John Herbertson was a Scotsman. Living at a time when education and geography were taking on new and exciting roles on the continent as well as at home, he brought energy and ability to both professions. He, more than anyone else, was responsible for taking geography into the schools of Britain.

Among those who influenced him, prior to his joining Mackinder at Oxford, were such varied characters as Patrick Geddes, Frederic Le Play, and Elisee Reclus. He obtained much of his observational skills from Geddes, a botanist. Le Play introduced him to Sociology and experiment in the field. Reclus, one of the luminaries of modern French geography, shared many ideas with Herbertson while visiting Outlook Tower, Geddes' laboratory of regional survey.

Herbertson was no stranger to the heuristic method in scientific work. For many years he undertook first hand meteorological observations at the summit of Ben Nevis. He taught at Manchester, an encounter with geography, at its weakest, which influenced him to fight to improve its position in the universities and schools of Britain. He had "only the poorer material to work upon, students who feel that their geographical work is a penalty for not doing better in the subject at the Queen's Scholarship examination and who do not care to devote to it more time than the bare minimum."[13]

Coming from an inductive background in botany and meteorology, Herbertson was ideally suited to field-work in geography. That same background training would soon assert itself in his new area. From 1895 onward, his concern for geographical education became steadily deeper. In 1898, he published an account in the *Scottish Geographical Magazine,* of 'The Perilous Plight of Geography in Scottish Education', in which he revealed that the case in Scotland was every bit as unsatisfactory as Keltie had previously highlighted in England and Wales. He immediately set himself the task of remedying the situation. He tackled the problem on many sides, including the instruction of young urban pupils in geography through field techniques.

When Herbertson came to Oxford, the position of geography education there was little better than elsewhere in the country. It was only through constant pressure by the *Geographical Association* that the governing bodies of the two old institutions agreed to establish a readership. Even then the Association had to undertake to provide financially for the maintenance and salary of the lecturer, Mackinder.

Mackinder had been appointed Reader in Geography at Oxford in 1887 and taught therefor twelve years without any department or institute. In the early part of 1899 the University of Oxford agreed to establish a School of Geography with the co-operation and financial support of the *Royal Geographical Society.*

Although the total number of those who gained the Oxford diploma in geography was small (only 68 while

Herbertson was director 1905-1915), their impact on geography education in Great Britain was enormous. Among those who were influenced by Herbertson and Mackinder was E. C. Spicer, later head of the Geography department at University College, Reading. Evan G. R. Taylor, C. B. Fawcett and Blanche Hosgood each contributed enormously to the perpetuation of the new geography established by their teachers. Both Mackinder and Herbertson shared the same opinion as far as geography education was concerned; they strove to put it on a par with other academic studies.

In methodology, however, they differed. Mackinder was a brilliant lecturer and a popular success, whereas Herbertson displayed his best geographical skills in the field. During the Sixth International Geographical Congress held in London, in 1895, and Herbertson read a paper entitled “The Importance of Geography in Secondary Education and The Training of Teachers Therein." Clearly showing his concern for the plight of geography at school level, he urged that the Congress should call upon the Government to press for the adequate recognition of, and provision for, geography teaching in schools and universities.

In the same year, in a similar appeal to the members of the Bryce Commission Herbertson again pressed for the fair treatment of geography at official level. He was an ideal partner to assist Mackinder in establishing the first British university department of geography.

Both Mackinder and Herbertson realized that they would not only have to train far more teachers of geography for schools but they would also have to undertake the retraining of those already at work. To do so they set up "short but intensive courses in the Long Vacation."[14] This was the birth of the Summer School idea. It proved so successful that it passed into educational science as a method for training teachers of geography ever since.

The first Summer School occupied three weeks in 1902 and was attended by thirty teachers and lecturers. Herbertson undertook a major share of organizing lectures and demonstrations, as well as conducting field excursions into the Oxfordshire countryside.

Encouraged by his initial success, he organised five biennial courses between 1906 and 1914 and the number of students increased considerably. Field-work was an integral part of the Summer School idea from the beginning.

Whilst Herbertson was personally conducting these field-work trips into the neighboring locality, specialists in particular fields were sought out to undertake practical first-hand work in a scientific manner.

The account of the 1904 vacation course given by J. F. Unstead, a participating student, who later became an eminent geographer at Birkbeck College, University of London, clearly indicated the important position that geography field-work had on these courses. Unstead was "particularly interested in the 1904 course in accompanying William Morris Davis, the American geologist, who was giving a demonstration in practical geomorphology by getting the students to sketch the contours of a region and to observe how the erosion of its streams could give a key to the development of river systems. For this he took a group to an area some distance above Oxford, where the small tributaries of the Thames could be seen to have deepened their valleys and captured the drainage of neighbouring areas."[15]

At the same Summer School practical work was also carried on indoors. There were lectures given by Herbertson and by visiting specialists, and practical work done in class rooms, such as abstracting from official meteorological returns the material relevant to some particular problem, analyzing it and making on squared paper curves or diagrams to bring out salient points. Field instruction was given in the use of theodolites and levels in local surveys.

Herbertson's contribution to geography education was enormous, both at university level and through all his pupils, who as teachers carried his work into the secondary and primary schools. Over 850 students attended one or other of his five summer schools.[16]

Herbertson initiated a trend which successive exponents of the field excursion have copied right down to the present day. He made utmost use of the transport system of his day in the pursuit of ideal locations where he could conduct his field-work. His successors have utilized the train, car, boat or plane in the same way that he utilized the bicycle.

The local area, the home district, the school's hinterland were all of primary significance to the practical field-worker, since these were within cycling distance. "Herbertson repeatedly urged the prime importance of studying the home district and he encouraged teachers to conduct their pupils on local excursions, utilising the relevant one-inch sheet of the Ordnance Survey Map."[17]

He realized the importance of the Ordnance Survey Map to the field teacher of geography at school stage, and insisted on the proper training of teachers in that particular area. Consequently he incorporated a map study section in the program for teacher training at Oxford.

In addition Herbertson undertook to persuade the Director General of the Ordnance Survey to issue maps to schools at a reduced rate. He maintained a consistent pressure on the O.S. authorities and within three years he was able to report the success of his campaign.

Within the lifetime of one man the status of field work in geography education had been recognised and established in a definite manner in both University and school. As others were quick to follow in his footsteps, the future of the method was assured in Britain.

Initially, all the field-work was confined to third level students and teachers at in-service courses. It was envisaged that this work would gradually percolate down into the classroom methodology. The situation was not without difficulties, however, and many problems appeared in the correspondence columns of the *Geographical Teacher* and appeared at intervals in discouraging articles.

The problem of time for field-work activities was uppermost at the 1905 Annual General Meeting of the *Geographical Association,* where it was claimed that "with two periods a week few teachers reached the stage of practical work. The vast subject of geography, the great globe itself, could be studied only through symbols, through maps and the teaching of the reading of maps was one of the first and most important exercises."[18]

On the other hand, the work undertaken during the Summer Courses continued to become more and more impressive, with important specialists conducting the field classes. Whereas in the beginning (1902) Herbertson and Mackinder were dealing with the very basics in practical work, because of the low standard of geography attained by the students prior to that, by 1912-13 the amount and standard of the practical work was much improved.

The summer school held in 1913 by Professor Fleure at University College of Wales, Aberystwyth, was attended by about forty students, "mostly University graduates interested in the improvement of teaching and the pursuit of local research in the subject."[19] In addition to a most impressive list of lectures incorporating the correlation of "The Geography of Europe with the History of its Civilization" demonstrations were organised in Contour Map Work, Cartology, Lantern Slide Work, Geographical Modelling, Climate Problems, and special visits were made to the Anthropological Museum of the College.

An exhibition of apparatus, books, charts, maps, and modelling methods was kept open during the school's session and was visited by groups of teachers from surrounding districts as well as by members of the school.

The skills of the teacher thus sharpened, the outdoor work was tackled and a phenomenal amount of practical work was undertaken by people who were supposed to be "on vacation." The report glosses over the miles of footwork, scrambling over rough terrain, sketching, mapping, measuring and calculating that were completed, but is nevertheless quite impressive.

In the same year (1913) Summer Schools of geography were also held at Yorkshire and Reading. These two colleges rivalled Aberystwyth in the intensity and professionalism of their courses. "Nearly one hundred and twenty students were present, about half of whom came from Yorkshire, and the rest from all parts of the United Kingdom, and the number must be considered satisfactory in view of a positive epidemic of Summer Schools which has characterised this vacation, and certainly the staff could hardly have coped with a greater attendance."[20]

The course was of three weeks' duration. Five half and three whole days were devoted to expeditions under the guidance of seven expert geologists, led by Professor Kendall of Leeds University. Kendall's quite unique knowledge of the whole district, especially of its glacial history, enabled him to clear up many of those difficulties which beset teachers who have to rely very largely on book knowledge for their interpretation of physical geography.

Dr. Smith, of the Agricultural College at Edinburgh, gave two lectures on agriculture and then accompanied the expeditions to illustrate his lectures in the open. Specialist type field-work was, therefore, being utilised at this stage. In the first place, the look-and-see approach helped students understand how things functioned in reality, and secondly practical work was used for the verification of facts in the field.

All the field-work had a relevant bearing on school teaching, and also created a carefully observant scientist who could transfer his learning from one area to the next. The year 1913 was not an unusually keen year for Vacation Courses--there were more in the following year--yet it serves as a good indication of the type and standard of the work at that time. In the decade or so that Herbertson was involved in Summer Courses, the position of geography in Britain had undergone revolutionary change. These varied field trips assuredthe teacher a sound background in the physical, human and economic geography necessary to teach. But more important still, directly experiencing geographical phenomena in the field enabled the teacher conduct field classes in the hinterland of his own school.

(vi) *The Geographical Teacher*

One of the chief agencies by which Herbertson spread his field work method was the new teacher's magazine--*Geographical Teacher.* In it teachers could find articles related to actual field experiments, hints and guidelines as well as accounts of up to date techniques and equipment.

The *Geographical Teacher*, the organ of the *Geographical Association* was started in 1901. Herbertson was closely connected with its initiation, and was editor until his death. Likewise he was secretary of the Geographical Association for fifteen years beginning in 1900. He was, therefore, the thrust of geographical advance during his later years. He witnessed and encouraged the transition from exploration to education, and utilized the magazine to introduce and inculcate sound educational and scientific methods.

Herbertson knew that "teachers of Geography required more than traveller's tales to form the substance of their lessons, and under his direction the 'Teacher' became a vehicle for the dissemination of basic information, techniques of teaching, reports of conferences, book reviews, but above all, for thought provoking articles on the content and organisation of Geography in schools."[21]

Soon a new trend was beginning to appear on the pages of that same magazine, that of articles by teachers who had conducted field classes themselves with their young pupils. These were of vital importance to the spread of the field-work method.

They indicated that the method was in fact working, and that other teachers were exploiting it to good advantage. Many problematic areas were highlighted in these articles and other teachers learned from them. In this way, a healthy crossfertilization of geographical field ideas took place on the pages of the *Geographical Teacher* during the early years of the century.

Not only was Herbertson responsible for this remarkable amount of published material concerning educational techniques and field-work methodology, but he also achieved what Dickinson before him unsuccessfully attempted: he persuaded the Geographical Association's Council to widen its membership to incorporate all teachers of geography, including those involved in elementary education.

He kept geography methodology in the public eye by writing letters to the *Times* and by raising issues at meetings and lectures. Above all, Herbertson's most outstanding achievement was the university extension lectures and the summer courses which both he and Mackinder organized for the promotion of geography and the training of teachers.

With the death of Herbertson in 1915, the end of the first era in the new geography was at hand. Mackinder's comment in his obituary adequately summed up the man and his work: "Our Association and the Teacher owe more to Herbertson than to any other man." [22]

His death also coincided with the First World War.

One event marked the end of an era; the other brought a new international outlook to the field of geography. In his short career in geography education, Herbertson had successfully established the method of field classes, both in the University and in secondary schools. The method was assured of a sustained exposure in the future because of the large number of teachers who had come directly under his influence.

CHAPTER FIVE

CONSOLIDATION: GREAT BRITAIN 1900 - 1920

(i) Diffusion: Secondary Schools

From the beginning of the twentieth century to the First World War field-work in geography education was accepted in principle as a teaching method among geographers and educators at third-level institutions. But as more and more teachers were entering the profession with suitable skills in outdoor techniques it became a practical method in many secondary schools as well. Similarly, teachers graduating from training colleges, took with them into the elementary schools the look-and-see approach to geography education.

Thus field-work practices were introduced in the first half of the twentieth century at the top and percolated downwards into the second and primary stages of education. From 1914-1918 the War halted the progress that resulted from the initial thrust.

That initial thrust took place within the precincts of the third-level institutions, where geography had been established as an academic science in its own right. Intensive study of that academic science was the heritage of the last decades of the preceding century, when extensive quests into distant lands came to an end. Indeed many of the first academic geographers had themselves been explorers of repute. Mackinder and Herbertson, who taught at Oxford, and F. Debenham, lecturer at Cambridge, were men who gained their experience from direct observations in the field. So also was J. Fairgrieve, who taught geography method at the London day Training College from 1912. His phrase *"geography learned through the soles of our feet"* [1] testified to his ideas on the link between exploration and the world of academic geography.

These men were not unaware of the tremendous advances that were taking place in geography education on the Continent. In Germany, Humbold and Ritter had developed the academic side of geography early in the nineteenth century. Elysee Reclus undertook similar research in France, and geographical studies emerged as a practical science dealing with man in relation to his environment. Chairs of geography were established at many European universities and it was taught to honors degree level.

In Britain, on the other hand, geography education was closely tied in with imperial expansion, with a view to advancing the economic well-being of the motherland. It was not until the late nineteenth century, when a mood of 'Little England' predominated, that geography was studied as an academic discipline.

Herbertson and others skilfully manipulated the continental influences to promote field-work methods in schools. In fact, the very first issue of the teachers' organ-- *Geographical Teacher*-- contained an article exemplifying the position of field-work in a German school.

In some cases teachers themselves learned the inductive method, on the Continent, from direct contact with school level field activities. J.B. Reynolds was one such person. A fotmer member of Mackinder's diploma class in the Oxford school of geography, she had first hand experience of outdoor geography education in Switzerland in 1898. Reynolds was enthusiastic about introducing the methodology to schools in Britain on her return. "Let us turn now" Reynolds said, "and consider what can be done in Britain to encourage class excursions. I think we must recognise at the outset that we are handicapped by certain unfavourable conditions, and that it is not likely that school expeditions will become as common here as in Switzerland for a long time."[2]

Reynolds' statement was remarkably accurate since the practical application of field-work theory was not fully accepted in schools until after the Second World War, when many of those unfavorable conditions had been removed.

Mackinder and Herbertson, too, realized that field-work methodology could not replace traditional modes of transmitted knowledge over night. They understood that once field-work was an established norm at third-level institutions it would percolate down to the second and primary levels. The existing institutions, therefore, the University and the training college, were the agents by which the dissemination of the new methodology would come about. But the many teachers of geography from the 'old school' had to be retrained if the method was to prove successful. Thus the Summer Course idea was conceived.

The advantages of running vacation courses to attain the desired result were numerous. Teachers had long vacations and, with suitable persuasion, showed they were willing to adopt new methods. Since each course had a practical emphasis, that facilitated rapid understanding the method spread quickly. The courses related directly to practical teaching matters, and for the first time, large numbers of teachers were suitably trained for the scientific treatment of geography education at school level.

Several universities advertized and ran successful courses simultaneously, testifying to their growing demand in the early years of the twentieth century. In a short time results of these intensive training courses became apparent. Through the pages of the *Geographical Teacher*, teachers familiar with the inductive method published personal accounts of recent experiments in the field.

The *Geographical Teacher* thus became a major factor in the success of the summer course and the spread of the new method. Herbertson was editor of that magazine until his death in 1915, and he skillfully used it to popularize the new methods and courses. Many of the articles published in the first fifteen years of its existence dealt directly with field-work in geography education. Every conceivable aspect of field activities received exposure, including time-tabling techniques, teachers' hints for outdoor preparations, physical and urban land-use, techniques on observation, investigation, and so forth.

In addition, Herbertson dealt with organizational and administrative problems as indicated by the Report for the spring of 1915. "The Committee which examined the question of cheap fares for geographical educational excursions has reported and the Council has accepted and sent out to the proper quarters its report, which recommends that the terms granted by the railway Companies to Boy Scouts under 14 should be extended to all scholars attending secondary schools, and that teachers accompanying them should be granted the same terms as Scoutmasters."[3]

The downward mobility of ideas from the universities was facilitated by the existence of an articulated system of education in Britain since 1902. From that time there was a real demand for skilled subject teachers in the secondary school, a demand, which, in the case of geographical field activities, was ably catered to by the vacation courses.

The general picture, though prosperous, was nevertheless far from perfect. Outdoor geography education was a sound teaching method, but it was not accepted as a part of the normal school routine. One concerned teacher painted a clear picture of his dilemma, saying that "Although geographical excursions are generally regarded as excellent in theory, they have no place on the school time-tables with which I happen to be acquainted, and such as I have organised have had to be undertaken in my own and the children's free time. The entire responsibility, therefore, has rested on me, and no compulsion could be exercised over the children."[4]

The objections to class teaching of geography in the field were so obvious that many feared it would not, under ordinary circumstances, become part of the Public School routine. The only possible times for such work were vacations and half-holidays.

Nevertheless, field-work continued to gain ground at second level schools in the years preceding World War One. Membership in the Geographical Association grew rapidly, and field activities became the accepted norm as a practical function of the Association. By 1914 geography teachers were active members of eight branches of the association attending lectures and field trips. In this way, field work and the inductive method were gradually percolating down and establishing a foothold in traditional areas of transmitted education.

(ii) Diffusion: Elementary Schools

Percolation was also the means by which the principles of the inductive method came to be used in the elementary school. The position of geography education around 1900 was generally unsatisfactory in most schools.

Many elementary school teachers attended the Summer Schools run by Herbertson and his colleagues. Others became familiar with the inductive method at Training Colleges, where enlightened geographers were utilizing that method, but these tended to be the exceptions rather than the norm.

The problem lay in the fact that many teachers graduated from training colleges and went on to teach elementary school pupils with minimal, if any, formal training in geography or the inductive method. Furthermore, geography was not treated as a distinct subject in most training colleges, but was a subordinate component of history. According to one teacher "The Board's examination of History and Geography required at most the drawing of various maps, illustrative of those topics of the history period which admitted such illustrations; but on the other hand, the Geographical element might be reduced, as in this years papers to the marking of certain positions on an outline map."[5]

In the light of such unfavourable circumstances the Geographical Association, in conjunction with the Training College Association, pressed the Board of Education for equality between geography and history. This was achieved in 1913 with the introduction of the *'New Regulations for the Training of Teachers for Elementary Schools'*. A welcome feature of the new program was the emphasis on a study of the home district incorporating the look-and-see approach. So teachers who subsequently entered elementary schools were suitably trained in that method.

As a result, direct observation of geographical phenomena became an intrinsic element of primary teaching methodology and the study of the local area by look-and-see principles became an established norm.

(iii) Interruption: World War One

In times of national crisis, educational issues tend to recede into the relative obscurity of the staffroom where day-to-day routines dominate life. This is true of wars, economic recessions and depressions. The first World War had this effect on the educational matters of England and Wales, but surprisingly, many favorable factors resulted when the dust settled in the post-war lull.

World War One brought educational advances to a stand still. Finance was restricted, teachers were conscripted, and educational matters receded to the background. Numbers at Conferences, and Summer Courses were reduced drastically, while in many cases cancellation and postponements disrupted field work programs. Most branches of the Geographical Association reported that activities had to be either curtailed or suspended until the war situation was improved. At the October Meeting, 1914, of the Geographic Association it was found "impracticable to arrange a programme owing to the preoccupations of our members upon various war organisations and it was decided therefore to suspend our meetings for the session. Another meeting was held on October 11th last when it was again decided to postpone our activities as a branch till the end of the War."[6]

On the other hand, the War had an inspiring effect on Geography as an academic discipline. This was translated into teaching methodology, and was a major factor for the continued acceptance of the inductive method in the War years. Mackinder, summarized this effect in his presidential address to the *Geographical Association* in 1916.

> In the first place I think we may say that in this War the geographer has come into his own. Some of us have been struggling for thirty years to get the public, and even the teaching profession, to realize the importance of geography. I think there is abundant evidence that the work that had been done in the past has suddenly borne fruit. As so often happens, those who have laboured, and apparently laboured for long without result, find suddenly that their work was far from being without result. They had sown the seed but it needed a storm of rain for the germination and growth of the young crop.[7]

Despite the war, geography was being readily accepted as an academic discipline in universities, and ordinary people were becoming aware of its importance on a global scale. Maps were receiving a widespread promotion in the media. This growth of geographical awareness was reflected in the academic world by the introduction of courses leading to honors degrees in both Arts and Science faculties. A Geographical Tripos was set up at Cambridge.

The period just after the War was marked by an increase in course enrollment, and subsequently an increase in the number of courses. The initial impetus inspired by men who were deeply rooted in practical exploration was slowed down, but many branches of the *Geographical Association* carried out field work exercises and exhorted their members to utilize that method in schools. The drive for the inclusion of field-work in normal teaching method came from above, and utilized the existing channels of development -- the University, Training College, Summer Courses, Geographical Association Lectures and the *Geographical Teacher*. By the end of the First World War field-work in geography was in a strong position to capitalise on any favorable advances.

CHAPTER SIX

ATTAINING A POPULAR PRINCIPLE, ACCEPTING A PRACTICAL PHILOSOPHY

(1) England and Wales: State involvement in education

The principles of geographical field-work were accepted in England and Wales during the first half of the 20th century. The political and economic climate, however, was not favorable for practical application of these principles. Educational reform and change have typically been responses to historical change. Concerted attention to and application of field activities by enthusiastic adherents of the inductive method maintained the pressure for field-work throughout the Depression and two World Wars. By the end of the Second World War geographical field studies were in a position to benefit from the extensive reforms which sprang from the Education Act of 1944. By the mid sixties, geographical field activities had become an integral part of the teaching methodology in every school and College in England.

These advances did not occur overnight, however. After World War I a series of setbacks militated against any expansion in geographical field-work at all levels of education. The setbacks were, essentially political and financial in character. The early 1920's were exceptionally impoverished in terms of educational expenditure, because in 1921 the Government became alarmed at the increase in the unemployment figures and introduced considerable cuts in public spending. Under the Chairmanship of Sir Eric Geddes, a committee was set up with the sole purpose of financial conservation. The implications for education were drastic as "Geddes' axe" brought educational development to a standstill. Grants were cut by one-third and teachers salaries were reduced. The building of new schools was confined to absolute necessity.

It was obvious that questions of innovation and experiment in areas of educational methodology would recede into the background. The education authorities of the day were most concerned with organizing and rationalizing what was already being provided, and were not favorably predisposed to expansion into new areas of endeavour.

Events outside the school, however, were focusing public attention on matters related to geography. The first quarter of the twentieth century witnessed the successful expeditions to the North and South Poles and likewise the attempt on Mt. Everest. It seemed as if the extremities of the Earth had been reached and nothing further lay in that direction. At any rate, it marked, the limits to which the Royal Geographic Society was willing to continue subsidizing geography itself. A spokesman of the time announced "It is now clearly understood that Geographers have reached the evening of the day of the great expeditions to explore whole continents or to unveil unknown river or mountain systems; but that leads on to the dawn of intensive study aimed at elucidating the inter-relations between the conditions which give individuality to definite regions."[1]

As far as time was concerned, the age of extensive exploration was over; it was time for intensive development in geography-- a matter for the national system of education. It was now up to the government to use the existing organization and facilities and the established teacher know-how to help geographical knowledge percolate down from the "Ivory Tower" of the university.

Traditionally, the Royal Geographical Society had been involved with the status of geography and field-work at university level, and had assumed responsibility for half the lecturer's salary and for grants for the provision of equipment. When government contribution in that area increased, in 1924, the Society withdrew its support-- support which was considerable.

> The Society had payed out of its own income a total of $11,000 to Oxford and $7,500 to Cambridge or, taking into account various small grants or donations to the Universities of Manchester, Edinburgh and Wales not less than $20,000. The sum is substantial when viewed from the standpoint of the Society's resources and the large claims upon them, but ludicrously small to have achieved so much. It has established in all our Universities a subject not previously thought worthy of attention, and has supplied to our schools teachers adequately trained in geographical studies. [2]

Government financial involvement had been initiated in 1918, when aid for field-work was given for a Summer Course at Aberystwyth.

Field work became an accepted part of official State policy in education. Its importance was to increase as the National System of Education expanded its scope and responsibility. Outdoor work was already an intrinsic part of the normal training given at universities, where vacation time was used for individual projects based on personal observation and for minor exploratory trips abroad. The University teachers published a series of books dealing with methodology. These quickly became the prime source books of geography teaching because they were the only available literature on the new geography, and they were directly related to the needs of the secondary teacher in the classroom situation.

Sir Archibald Geikie, an outstanding geographer, was one of the first to produce a book on teaching method. He believed that field work deserved a place in the school curriculum, and stressed its importance in his book *Teaching of Geography*. "The teacher should from the first realise that some of the most valuable part of the training his pupils can receive are not attainable within the walls of the classroom" Geikie said. " Where practicable he should himself take walks with his pupils and direct their attention to the objects to be seen as they go."[3]

Throughout the book, Geikie exhorted the teacher to utilize the "things" of geography in the teaching of geography. He set guidelines so that the teacher might the better use time in the field. He outlined different field objectives ranging from merely obtaining fresh air and relaxation with his pupils to really making the walks a discipline for the young.

In 1915, B.C. Wallis, a fellow of the Royal Geographical Society, also published a textbook in Geography Methodology for Teachers. It was one of the *Cambridge Handbook for Teachers* series, and contained much of the methodology attributable to the Cambridge School of Geography. Wallis devoted a chapter to outdoor and holiday work. He differentiated between simplistic observation and discovery techniques for younger pupils and more complex verification of facts in the field techniques for the more mature pupils.

The specific training and that availability of relevant literature during the first quarter of the Twentieth Century meant that more teachers with field-work skills were entering the profession. During the inter-war period, however, money shortages tended to curtail field work, and in some cases eliminated it altogether.

Between the two world wars the principles of field work were carefully planted and nurtured in many school programs. They were, therefore, in an advantageous position to blossom and flourish in the tremendous educational expansion, which was so much a feature of the post-war years.

(ii) World War II Watershed

World War II must be seen as a major watershed in educational development in the United Kingdom. Likewise, it was a major milestone in the advancement of field-work principles and their practical application in the schools of England and Wales.

The war highlighted several important factors that caused considerable concern in educational circles. It was discovered that many recruits were educationally inferior, being for the most part semi-literate. Likewise, many of the children who were evacuated during the bombing raids were found to be backward.

The Report of the Percy Commission (1945) claimed that Britain had survived the war through the contribution of Science and Technology. It also pointed out that the sophistication of modern warfare had increasingly involved highly educated and qualified personnel in combat areas, and their numbers were seriously depleted as a result. Unlike the previous war which was a trench event, the scientific nature of this war had created an uneven burden on the well-educated. In addition, there was a growing realization in the Western world that equality of educational opportunity was essential to counter the challenge of Communist ideology. (In 1944 Russian forces were half-way across Europe.)

The years immediately after the war were dominated by a real effort to make good these shortcomings. The emphasis was thrown back on the Spens report of 1938, which had been shelved due to the war. The tripartite system of education envisaged by the Spens Commission evolved under the 1944 Education Act. It was an attempt to provide for equality of educational opportunity and quality of education quickly, within the framework of existing educational facilities.

The mere enacting of a bill did not and could not, provide at once the schools, the teachers, the equipment, etc., needed to cope with an immediate expansion of secondary education. There was an acute teacher shortage, due mostly to the exigencies of war, and money was scarce too. It was clearly necessary in the post-war years that manpower and monies should be judiciously used. These foregoing factors, in varying degrees, made it necessary to devise a selection system at the end of the primary stage to determine the secondary education of the youth of England and Wales. The 11+ examination was that screeening device, and through the end of the 1940s and1950s it served its purpose effectively.[4]

Educational philosophy in the immediate post-war years incorporated a survival attitude. Britain had to compete in a world where industry and commerce were undergoing rapid change. At the same time, there was a renewed awareness of the importance of democracy and the nature of the child. This resulted in the sweeping reforms of the *1944 Education Act.*

The new philosophy's implications for field-work in geography education were enormous. Traditional educational moulds were shattered; traditional bias and method were overwhelmed by modern thinking. Geography was treated as a science in its own right. The world outside the classroom was accepted as the true geographical laboratory.

Central to that development was the Ministry of Education's Circular 140, issued in 1947, revoking the regulation which required the consent of H.M. Inspectors for all secular instruction given off the school premises. The long expressed belief that field-work was essential to learning geography could now be practiced without legal and formal difficulty. Paedocentric education, as part of the new philosophy, involved changing institutions to suit the child.

The Geographical Association acted swiftly. Anticipating increased demand for scientific field-work it decided to make provision for residential field-work courses. Experience had shown that short excursions and day trips were difficult to organize and generally did not warrant the effort. Thus, Field Study Centers were initiated to provide residential courses in the field under the guidance of teams of experts. They provided the facilities for outdoor activity in the natural environment where the inductive method would be used. The courses could also be adapted to suit the size and age of each visiting group.

The first field center was established in 1947 at Flatford Mill in Suffolk. A phenomenal growth in the number of centers occurred with an excess of 200 ten years later.

This demand reflected the culmination of the principles and philosophies set out in the 1944 Education Act.

The raising of the school leaving age, and the consequential compulsory attendance of greater numbers of pupils, meant that more people were involved in education in England and Wales than at any previous time.

Since geography was an integral part of all school curricula, and field-work an accepted methodology, the field center quickly became an important part of every school. The proliferation of educational institutions, including Colleges of Advanced Technology, and Polytechnics further increased the numbers involved in field-work.

Geoffrey Edward Hutchings was a pioneer in the provision of field study centers. A renowned geographer, skillful field worker, and warden at Juniper Hall Field-Center, he contributed more than any other man to the field work cause in the post-War period.

Hutchings' educational philosophy embodied the inductive method, envisaging an articulated system of work developing from the initial observationary and discovery principles to a more advanced empirical deductive method. Ideally Hutchins thought that "educational field work should continue through the whole of a child's school life. If it did so the curiosity of the young child and his joy in the world of nature, would never end abruptly as they so often do, but would lead in later youth to a critical interest in his environment and a capacity to gain reliable and usable knowledge from what he sees around him."[5]

Hutchings transmitted his expertise and enthusiasm for the study of geography by first-hand observation and deductive methods to the many teachers and pupils who came under his influence. Under his guidance field-work activities grew rapidly.

As president of the Geographical Association in 1960, Hutchings realized the unique opportunity within his reach to further geographical field-work.

The title of his address "Geographical Field Teaching" outlined the theme of the Association's Annual Conference. Methodology related to outdoor work dominated the entire conference. Papers on related topics were read by some of his colleagues, and an exhibition in field work in schools was successfully organized. Geographical field activities, therefore, were firmly established by the 1960s, and prospered under enthusiastic guidance.

Britain, too, prospered in the 1960s under a favorable economic climate. In turn, there was a ready availability of finance for educational endeavour. Geographical fieldwork expanded rapidly with increased state aid administered by the local education authorities. Beginning in 1959, the L.E.A.'s were empowered to grant financial assistance for excursions, visits to field centers and the like and many authorities owned their own centers.

The Geographical Association also made representation to the Department of Education and Science, and received financial assistant for teacher in-service courses on field methods. At the same time, undergraduate and graduate teachers, were exposed to a proliferation of publications dealing with field activity and methodology. This availability of relevant reading material, finances, and facilities, ensured that every teacher of geography entered that profession suitably trained in the inductive method.

The ultimate sanction was achieved in the late 1960s when the Examination Boards prescribed field activities as compulsory preparation for A level G.C.E. examinations. Although field-work was not compulsory at O levels, the majority of the Examination Boards drew up syllabi and set examination questions on topics directly relating to the inductive method, thus making adequate provision for pupils opting for that area of study.

The move to comprehensive schooling in the nineteen seventies was a logical development of the ideal--equality of educational opportunity--initiated under the 1944 Education Act. Since geographical field-work was by then (1970's) firmly established in all school curricula it followed that it became an integral part of the new system.

Geographical education had undergone a slow, but definite, evolutionary process. A book subject dominated by rote learning at the beginning of the century, it became a science studied by the inductive method in the geographer's true laboratory--the world outside the school. Here he acquired his knowledge squarely through the soles of his feet.

(iii) Scotland

Field-work education in Scotland developed along similar lines to that of England and Wales. It was accepted in principle around the beginning of the Twentieth Century and slowly gained ground as a teaching method during the unfavorable inter-war years. Then, in the years immediately following World War II, field activities became accepted as an integral part of geography education at all levels of schooling.

In spite of obvious geographic connections with England and Wales, Scotland possessed an autonomous system dating back to the Eighteenth Century, retaining a distinctive national church and legal system ever since.

Yet in terms of geography and exploration, Scotland and England and Wales established close links in the 19th century period of colonial expansion. In fact, Scotland could be said to be a prominent partner in opening up Africa, Australia and the Polar regions. Livingstone and Stanley, in particular, focused the attention of the public on matters relating to geography. The realization that imperial expansion was drawing to a close led to an intensive study of geography in its own right. In Scotland, as in England and Wales, this intensive study was taken up by men, well-versed in the inductive method. Herbertson, a Scotsman, was already aware that geography should only be taught by using the principles of that method, and he conducted field excursions in the school environs of Dunfermlin. Like Herberston, many exponents of the scientific method of teaching geography were driven south of the border by the hard dictates of fortune.

In England and Wales, the 1902 Education Act laid the foundation for the modern system of education. Under it geography and field activities began to expand. In scotland on the other hand, education reforms were delayed until 1929, during which time field activities made little if any progress. Concerning this apparent stagnation of field-work in Scotland, Herbertson stated: "The Committee of the British Association appointed at Dundee in 1912 has prepared a somewhat pessimistic report on the new conditions of Geography in schools, training colleges and Universities North of the Tweed."[6]

Although the general principles of the 1902 Education Act were adopted in Scotland in 1929, they made little impact on geography field activities in an inter-war period marked by economic recession. Individual commitment of teachers, however, continued to promote the principles of the field method. The Royal Scottish Geographical Society also maintained a pressure for the practical application of that method at all levels.

They urged their members in the teaching profession to adopt the inductive method, but they also exhorted the Scottish Education Department to modernize the study of Geography. A deputation was sent to the advisory Committee of the Scottish Education Department to express the views of the Society on the importance of Geography in Education.

After 1929, however, Scotland and England and Wales had adopted similar educational systems.

In the aftermath of World War II, many international influences caused Scotland to forge even closer educational links with England and Wales, links expressed in a program of concurrent legislation bringing about a general uniformity of events. The move to equality of educational opportunity and various agencies like O.E.C.D., UNESCO., E.E.C. influenced all parts of the U.K. similarly. Thus the principles of the 1944 Education Act were adopted under the 1945 Education (Scotland) Act and Educational reform ensued.

The implications for field-work in geography education were enormous. From an accepted principle it developed into a practical application of the scientific method and became an integral part of school life. Advances included time-tabling for field activities and availability of finance for equipment and assistance. But above all, the establishment of the first field center was central to the acceptance of the scientific method of studying geography from first principles.

Initially the Garth Memorial Youth Hostel was used as a temporary base from which excursions were conducted into the Glen Lyon hinterland. Such excursions incorporated observationary exercises, mapping, annotating and using sound deductive principles in outdoor work. Then in 1964, eighteen years subsequent to England and Wales, Kindrogran House, Scotland's first field center, was opened. Others quickly followed. The centers were organized and run on similar lines to those in England and Wales. Indeed constant cross-border mobility between field centers became a marked feature of secondary schooling.

Acknowledging the importance of geography field activities, the Scottish Examination Boards made provisions for examining field activities in the Scottish Certificate Examination in the late 1970's.

(iv) Northern Ireland

Northern Ireland possessed an autonomous educational system since 1922. On the other hand, for historical reasons, as part of the United Kingdom, it followed closely the innovations introduced in England and Wales. Thus the 1902 Education Act was followed in 1923 by a similar Act incorporating the principles of the former. Field-work also, began to expand slowly in Northern Ireland. Due to crossfertilization of ideas, strong Unionist pressure for step-by-step uniformity with London, and equalizing international influences, a similar evolution of geography field activity took place in Northern Ireland as it had in the rest of the United Kingdom.

The post World War 11 period saw the 1944 Education Act adopted under the 1947 Education (N.I) Act and the subsequent expansion in all facets of schooling. By 1976 a report in *Geography* explained that "Northern Ireland in spite of Belfast's troubles increased its attendances and its production of a guide to field study sites is well advanced.[7]

In spite of social and political upheavals, Northern Ireland maintained parallel educational development with the U.K. Field-work in geography education followed similar trends in Northern Ireland as it did in Scotland and England and Wales.

Consequently, geography pupils in Northern Ireland study their subject in the field utilising their senses, observations and intelligence to develop an awareness and understanding of geographical phenomena.

CHAPTER SEVEN

Republic of Ireland: The Last Outpost

(i) Historical Background

Traditionally, educational development in Ireland was strongly influenced by Britain. Colonial links, initially, and constant mobility between the two islands, in more recent years, maintained that trend. In modern times, improved inter-communications between the close geographic neighbors has further enhanced that position.

Ireland was the first part of the British Isles to receive a National system of education, and that by Royal Prerogative from London in 1831. By 1878, the demand for education other than elementary was met by the provisions of the Intermediate Education Act. From the outset, second-level education was examination-orientated and the curriculum was heavily biased toward literarature and the arts. Methodology and innovation could play no part in such a system.

The majority of schools were owned and run by Religious bodies and consequently the propagation of the beliefs and dogmas of particular churches made up a sizeable portion of the curriculum. Payment by results had been abolished around the turn of the century, but it continued to cast an ominous shadow over educational endeavor, and examination results continued to be the yardstick of success.

Educational philosophies of the republic of Ireland, after 1924 included the revival of a language and culture which had been lying dormant for some generations. Finally, the first half of the twentieth century was for Ireland a period of economic decline and massive emigration.

In the light of these factors it was not feasible to successfully introduce innovations into the educational system; because they would prove costly in terms of time and money.

In the nineteenth century, geography education in Ireland, as in Britain, was for the most part a compendium of Capes and Bays. Pupils were required to commit to memory long lists of places or names which had no direct bearing on anything, save memory. Traditional methodology was one of transmitted knowledge. The scientific method for outdoor geographical work where personal observations and discovery played a major part, could not possibly be accepted in a system dominated by classical thought.

Prior to the establishment of the National System of Education (1831) the schools of John Synge, William Hickey and the Kildare Place Society experimented with educational innnovations. In these isolated experiments geographical field-work was carried out in the manner that Pestalozzi had taught.

Synge had personally visited Yverdun and witnessed for himself the heuristic approach used by the teachers there. He resolved to carry out a similar project on his father's estate in Roundwood, County Wicklow. Similarly, Hickey, the Anglican Rector of the Parish of Bannow, Co. Wexford, learned of the Pestalozzian principles indirectly through Fellenberg, a former partner of Pestalozzi. Inspired by what he had learned, Hickey opened a school on Pestalozzian principles in which the outdoor environment played a large part.

There were other influences that originated on the Continent and had enormous implications for geographical field-work in Ireland. The nineteenth century was witnessing the final phase in the opening up of the unexplored regions of the globe. Ireland did not remain immune to such developments as Henry F. Berry, historian of the Royal Dublin Society noted, "Mr. Markham, in the geographical section, read an account of the search for Sir John Franklin, by

McClintock's expedition, and on the evening of the 31st August, Dr. Livingstone, the African traveller, lectured on Africa in the new museum."[1]

Such an account, in 1857, would lead one to believe that geography education in Ireland was progressing along similar lines to those in Britain in the nineteenth century. Yet historical factors dictated otherwise, and fieldwork in geography education never became a practical reality in Irish schools.

From the beginning geography education at primary school level was grossly neglected. Field activities were too much at variance with traditionally accepted methods of teaching to be considered as a pedagogic tool. There are numerous instances in the **'Reports of the Commissioners of Primary Education'** when inspectors described the unsatisfactory state of geography in the schools. In his report for the year 1863, one inspector called Geography "the worst taught branch of education."[2]

Methodology, for the most part, consisted of a combination of rote learning and map pointing. The District Inspector for Letterkenny, summarized the poor state of geography education saying, "this is a subject capable of being made very interesting to children, and I have invariably found that where it is taught in such a manner as to excite interest, the proficiency is most satisfactory. And yet there is no subject which I found taught in a more dull, dry, or uninteresting manner."[3]

Matters deteriorated considerably when in 1900 geography was made an optional subject on the schools' curriculum and it was reported that "all knowledge of geography is disappearing from the schools."[4]

Any lip service it received was by way of literary geographical and historical readers. History and English were combined with geography, and these were treated as book subjects. In this classical tradition the heuristic approach was anathema. The method by which the pupil was to find out things for himself, using his own observations and deductions, was so much at variance with the accepted method of transmitting knowledge that field-work could not be considered.

Around the turn of the century when geography education, together with field work, were already on the threshold of great development in Britain, they were experiencing stagnation and decay in Ireland. The process of historical change had created a situation that militated against any comparable development of field-work in geography education between the two neighbouring islands.

(ii) Grenville A.J. Cole

There were, however, individual attempts to forge strong links between the two countries in order to bring geographical endeavour in Ireland into line with that in Britain. Foremost among these individuals was Grenville A.J.Cole. Sadly Cole's attempts were doomed to failure from the beginning because his efforts coincided with that period of troubled history associated with the rise of the new state, when anti-British feeling was predominant.

Born in London and with a solid background in geology he visited Ireland for the first time in 1884, the year Keltie undertook his eclectic survey on the state of geography education in England and Wales. In 1890, Cole took a position in the Royal College of Science in Dublin. As a geologist he was a practical field worker, and he conducted many practical geological surveys in Ireland. In 1911, accompanied by Davis the celebrated American Geomorphologist, he undertook an expedition incorporating the Munster Blackwater River Valley. Davies, lecturer in Geography at Trinity College Dublin, said "They went there to see the strange bend in the Blackwater described by Jukes in 1862."[5]

Through working and residing in Dublin Cole maintained a close contact with the Geographical Association in Britain. His contribution to that organization culminated in his election as its president in 1919. He worked in close harmony with the guiding intellectuals of the Association in England: Mackinder, Fleure, Roxby, Freshfield and Geddes.

Cole consequently spearheaded a movement to set up and establish an Irish version of the Geographical Association. The I.G.A. was affiliated with its British counterpart and many ideas and methods which had originated in England were introduced in Dublin by Cole. In 1921, he utilized the Mackinder and Herbertson Summer School idea to promote in-service courses for teachers. Davies recorded the eleven-day summer school organised by the Irish Geographical Association in that year for geography teachers. "The programme for that school looks surprisingly modern. There were lectures on landforms and scenery, maps and map reading, field work in biogeography, historical cartography, Irish Industry and power resources, and geographical modelling together with field-excursions to Howth, Dunsink Observatory, the Dublin and Wicklow mountains, Killiney and the Dublin Docks."[6]

Indeed the program looked surprisingly modern in the Irish context, yet on a comparative note, those methods and activities had been integral parts of geography education at third level institutions in Britain for a decade or more. Cole simply transferred the techniques and experience to the Dublin Summer School.

Cole also campaigned for the inclusion of geography in the curriculum of the Universities. He realized that no improvements could come about in the schools unless teachers were properly trained in the new methods. He proposed a motion to that effect in 1923, at a meeting of the Irish Geographical Association, stating that "this meeting instructs the committee of the IGA to take steps to bring the need for higher geographical teaching in Ireland before the authorities responsible for the curriculum of courses for degrees in the several Irish Universities, and to urge the inclusion of Geography among the subjects that may be selected by undergraduates as the principal study of their final years for degrees both in science and the arts."[7]

Cole also made attempts to highlight and improve the state of geography education in second level schooling. Under his Chairmanship "an animated discussion on the position of Geography in Irish Schools took place"[8] at a Meeting of the Irish Geographical Association, 1918. When the Reports of the Inspectors for primary and Intermediate education had been received and discussed, Cole concluded that "one of the chief duties of the Irish Geographical Association should be to move the Boards that are responsible for the examinations and syllabuses in the Irish Schools to give a far more important place to geography."[9]

In truth, Cole's work had only begun when he died in 1924. The Irish Geographical Association folded up four years later.

In the early 1920's, therefore, even before the Irish Free State came into existence, geography education in Ireland was in grave danger of becoming a cindrella sister to its neighbors across the Irish sea. Field-work as a viable teaching method was virtually unknown and rarely used. Then in 1922, the Ministry of Education for the new state was set up. It was at the hands of that body that future development could take place.

(iii) Education in the Irish Free State: Primary

When the Department of Education was instituted in the aftermath of the social and political upheaval associated with the civil war, it did little more than paint a green facade over the existing one. The state's underlying philosophies for education policies stemmed from a desire to rid itself of all things British. The Irish language and culture were, therefore, given undue emphasis in the school curricula.

Imposed political philosophies and ideas need educational vehicles to transport them to their destination. In the Republic of Ireland, Schools were to be the transport systems towards the inculcation of an Irish ethos into the minds of the youth.

This philosophy was stated in the Report of the Council of education for Secondary schools in 1960. In that document it was claimed that the Nature and Aims of Secondary Education included the following: "The school is the instrument which society uses for the preservation and transmission of the culture of the past and for the organised development of the younger generation towards certain ends or ideals."[10]

It further stated that Irish Schools were "the heirs of a great tradition and it is universally recognised that their purpose is, in short, to prepare their pupils to be god-fearing and responsible citizens."[11]

These philosophies were also expounded curricula for the elementary school. The report issued by the First National Programme Conference 1921 stated that the existing system was generally out of harmony with national ideals and requirements. The new ministry immediately set about rectifying the situation and it gave a more national tone to the history, geography and singing syllabi.

The full curriculum now had even more to contend with. Time-tabling pressures were increased. The Irish ethos gradually filtering into the schools did so at the expense of time-consuming activities like field-work. Thus the principles of rote learning and map pointing were reinforced--these being the traditional accepted methods of imparting geographic skills as well as being the cheapest. Any innovations that occurred were confined to the Irish Departments. The 1950 Report of the Council of Education recorded that "One of the first acts of the new Government was to issue, in a public notice on the 1st February, 1922, an order providing that, from the 17th March, 1922, 'the Irish Language be taught, or used as a medium of instruction, for not less than one full hour each day in all National Schools where there was a teacher competent to teach it.' "[12]

It was proposed that the teaching of Irish history and geography, singing and physical training, was, where practicable, to be through the medium of Irish. The Report further documented that the shortage of teachers qualified in Irish was an obstacle to the successful working of the new program. Consequently, it was decided to embark upon a new method to insure the speedy supply of qualified teachers in the Irish language: "To overcome this obstacle, summer courses in Irish for teachers were held between 1922 and 1926 and teachers were allowed special leave to attend them, attendance being obligatory on those under 45 years of age."[13]

Thus, while teachers in Britain and the Continent were being trained for geography field-work at summer courses, those courses were used in the Irish Republic to prepare teachers to assist the government achieve its new goals, namely, "the strengthening of the national fibre by giving the language, history, music and tradition of Ireland their natural place in the life of Irish schools."[14]

That program, initiated in 1921 and implemented in 1922, remained in operation with little change up to the sixties. In 1934 "certain modifications" were made. These modifications further alienated field-work as a teaching method. As far back as 1850, in the post famine time, the then Board of Education made provision for the teaching of proper farming skills. The Powis Commission (1867-'70), however, proposed instead of Schools with large farms attached, to encourage the development of National Schools "with small farms attached." In this way pupils were partaking of outdoor practical work in the form of Nature Study.

But in 1934, nature study, became optional in all schools. At the same time a "revised course in Irish" was introduced. 'Optional' in a system, still recovering from payment by results, where examination success was the goal of education meant that, in practice, it was dropped from the curriculum. This is evidenced by the various reports written by the Inspectorate. Although the members of the Council of Education were agreed that Nature Study was a useful subject, they nevertheless considered that one period a week (half an hour) was sufficient to achieve the lofty aims they set out. Similarly, the time allotted for geography was half an hour per week.

At primary level, therefore, the position of geographical field-work could hardly have been any worse. This unsatisfactory state remained until the sixties when forces in and outside the Republic combined to precipitate educational reform.

(iv) Secondary

Prior to 1878, when the Intermediate Education Act was instituted, schooling at that level was informal and haphazard. Education was provided by various charitable or private institutions catering to those who wished to continue on after the elementary stage. The Act of 1878 introduced the state to second-level schooling up to the Intermediate Certificate Examination. From the beginning the education provided was dominated by a study of the classics and literature for a terminal examination.

Teachers were paid on the basis of the examination results. In 1903 geography entered the system under the umbrella of English and History.

The Intermediate Education (Amendment) Act 1924 replaced the old system. But again the government merely splashed a coat of green paint on the existing system. Payment by results was abolished, but continued to cast a dark shadow over the educational objectives. Examinations continued, also, to be a dominating feature of the new system. In that same year (1924) the Leaving Certificate Examination was introduced and scholarships were set as educational goals.

One of the striking features of the 1924 Act was its deliberate committment to the inculcation of the Irish ethos already referred to. It pervaded all areas of educational endeavour.

At Intermediate level, geography education was carried out as part of the history course within the framework of the Irish language revival. Field-work played no part in the new system. Pupils were treated as empty vessels to be filled with prescribed knowledge to be later regurgitated at the terminal state examination.

By 1960, however, there was an awareness among certain individuals that the state of geography education in the Irish Republic was in dire need of reform. That awareness was confined to a minority and there resulted no immediate change at second level. It was explained in the Council of Education report in 1960 as follows:

> 234. A minority of the council is convinced that geography should be separated from history and regarded as a distinct subject of equal value with history for the Intermediate Certificate. Among the arguments urged in favour of separation are: the development of geography as a subject of study, both intensively and extensively, in recent decades, a development which is illustrated by the facts that in the schools of neighbouring countries and in continental curricula geography is treated as a separate subject, and that most modern universities have special chairs of geography; the ever increasing importance of a sound knowledge of geography to students in the modern world; under the existing system geography is a cinderella subject, an inferior partner of history, relegated to a minor place. The members who advocate separation would still require history and geography to be compulsory in the junior curriculum, which would then consist of seven subjects, now six, but would not demand that either subject should be compulsory for the Intermediate Certificate.[15]

The council swiftly rejected the convictions of the minority, favoring the continuance of the existing arrangement. In so doing, the council prolonged the stagnation of geography education and militated against the introduction of any scientific study method.

So even in 1960 Field work at second-level education was not an accepted method to study man in relation to his environment. However, the social and economic character of the country was undergoing gradual change in a European environment which was experiencing radical educational reform. And so the pattern of historical change was creating a suitable climate for reform.

(v) Third Level

Third-level education displayed distinct signs of retardation in areas of geographical commitment, in general and specifically, in areas of field-work.

When Queen's University, Belfast, set up a Chair of Geography in 1945, it was late in comparison to other universities in the United Kingdom.

It was 1959, however, before the first Chair of Geography in the Republic of Ireland was instituted at University College, Cork--a constituent of the National University of Ireland. The remaining Colleges of that institution, namely University College, Dublin, and University College, Galway, established Chairs of Geography in 1960 and 1962 respectively. Although T.W. Freeman was full-time lecturer in geography since 1936, it was not till 1966 that a Chair in the subject was setup at Trinity College, University of Dublin.

At University College, Galway, field activities were curtailed due to lack of staff, facilities and a burdensome curriculum. Here a strong nationalist ideology placed undue emphasis on the promotion of the native language. Breandan S. MacAodha, head of the geography department, stated, "Most courses in the department are available through the medium of Irish as well as English; This adds considerably to the lecturing load. An increase in staff is an urgent necessity. The present staff are Breandan S. MacAodha, statutory lecturer and head of department, and Dr. Donal O

Hogain, assistant lecturer. Their main interests are in the human geography of Ireland particularly settlement, population, land utilization and planning."[16]

The position of geography and the status of field work in the Irish Universities by 1967, was reflected by the staff quotas. In the National University, U.C.C. and U.C.G. had two staff members each, and U.C.D. was little better off with five. Trinity College, Dublin, was in the best position with seven. On a comparative note, however, Queen's University, Belfast, nearly equalled the entire third-level geography staff in the Irish Republic, with fifteen as opposed to sixteen.

As far as the three Colleges of the National University of Ireland were concerned, it was quite obvious that whatever ambitions towards field-work the members of the departments might have had, they were hardly in a sound position to organize or oversee them. Trinity College, on the other hand, reflecting the wider international link and, in particular, a parity with its contemporary colleges, Oxford and Cambridge, incorporated in its courses a commitment to field work. Head of the Department, J.P. Haughton, wrote in 1967 that "Field work is an integral part of all courses and all Natural Science students are expected to attend one of the longer excursions arranged during the Easter vacation. These include a continental excursion at least once in three years. General Studies students must attend at least one long excursion before graduating."[17]

The position of field-work at third level educational institutions was clearly in need of expansion. Events outside the country played an important role in bringing about that expansion. Organisations such as UNESCO, OECD, EEC and others, brought pressure on the Irish government to introduce reforms into the educational system in order to bring it into line with the rest of Europe. The OECD report "Investment in Education" was initiated in 1962 and published three years later. That report had far-reaching implications for Ireland. It was as a direct result that free secondary schooling was introduced to the Irish Republic a few years later.

In the late sixties and early seventies, therefore, reforms were introduced at all levels of schooling in the Republic of Ireland. At primary level a 'new syllabus', incorporating many of the paedocentric qualities of English and European education, was phased in. At the universities the availability of additional finances produced expansion in many departments. The geography department of UCC received three extra staff members and consequently field work methods were adopted. Developments also took place at the other constituent colleges of the NUI, so that by the mid seventies graduates were entering the teaching profession with some field-work background. Whether that experience was relayed to the pupils in their care depended on the existing systems in the other two levels.

(vi) Reform: European Intervention

The universal problems which followed both world wars were very evident in the Irish Republic. Here emigration reached its highest level since the mid-nineteenth century. Expenditure was niggardly in terms of educational commitment. The reports of the Council of Education, one for primary, the other for second-level education, were extremely conservative in character. Instead of advocating reform, the status quo was rigidly defended.

Outside the country, however, advances in educational thought and practice were already widespread. In America, for instance, in the wake of the Russian success with Sputnik, 1957, there was an increased awareness in the need for science education. The idea of education as a national investment was favored. In Europe, the post-war legacy was a desire for cooperation on an economic level, and unity towards a common future. In Britain, equality of educational opportunity was taking root.

The reasons for the delay in reform in the Republic of Ireland lay generally in the depressed state of the country. The 1950s witnessed massive emigration, economic contraction and widespread migration from rural areas to urban centers.

The realization, finally, that education was linked to economic well-being heralded the introduction of change. This awareness came from the UNESCO and OECD educational documents which were part of the post-war European plan. These programs made it quite clear that schooling could contribute to economic growth. The government was, just then, embarking on the First Programme for Economic Expansion. Convinced that the educational system was not sufficiently geared to this expansion they set about correcting this situation and introduced the reforms of the1960s.

The focus of attention, however, was not on geography, and field work was certainly not a major issue. Gwenda Hurst was the catalyst who arrived on the scene amid the atmosphere of change and put geography and field-work in a respectable position.

A graduate of Cambridge, and with a sound background in the inductive method. On her arrival in Dublin, Hurst was immediately struck with the immense lack of interest in geography education. Convinced that the Geographical Society of Ireland (1934) was of little use in the promotion of good methodology in geography education, she was a driving force in founding the Association of Geography Teachers of Ireland (AGTI).

The AGTI was founded in March 1962. By June of that same year Hurst was able to report on the progress made by the new Association, in relation to demands for school reform. It was reported in the minutes of the Geographical Society of Ireland for the 14th June, 1962, that:

> A letter from the Association of Geography Teachers of Ireland requested the assistance of a delegate from the Geographical Society to consider proposals for a new geographi-

> cal syllabus for Secondary schools to be submitted by the association to the department of education. Mr. G.L. Davies undertook to act as the delegate.
>
> Mrs. Hurst gave an outline of the progress made in forming the Association of Geography teachers of Ireland and its present desire to arrange courses for geography teachers. There appeared to be a need for a residential course and expenses to be met by the Department of Education."[18]

The objectives of the AGTI were Hurst's personal ambitions. Through that body, she strived to achieve two goals: to improve the standard of existing geography teachers and to modernize teaching methodology by introducing to Irish schools innovations which were in use in Britain and the continent. For that purpose seminars, lectures, and field excursions were organized. She was instrumental in planning the Summer Refresher Courses in Geography in 1963, 1964, 1965, and had the blue prints for the 1966 course already at hand when death claimed her. Many innovations were introduced by her into the scope of Geography teaching in Ireland, including aerial photography, film strips and ordnance survey maps.

Hurst died in 1966. The AGTI, however, grew from strength to strength. Ten new branches had sprung up in the Republic by 1978. From the beginning field-work was a welcome feature of the AGTI programme. Local pools of talent were exploited to carry out excursions and other work in the out-door. The Inspector from the Department of Education assigned to Geography (since 1967) was frequently called upon to render advize and demonstrate field work and other teaching techniques.

Initially the AGTI's journal, *Geographical Viewpoint* conveyed to its members articles confined to geography as an academic subject. However, certain members were of the opinion that the academic bias, intentional or otherwise, constituted a regrettable feature of this journal. Consequently, the Journal of the Cork Branch of the AGTI was launched. In that journal, the majority of the articles were written by teachers and served a local readership. Practical experience in teaching techniques was foremost in the list of articles. For instance, in the 1979 issue there were three articles relating directly to field-work, while four others of the remaining six dealt indirectly with the same topic.

Suitable time-tabling arrangements still constitute a major problem area in an overcrowded curriculum, that caters to terminal examinations. As a result, any field-work, that is conducted is usually done by enlightened teachers, in their spare time, and at their own expense. Consequently, many field trips end up as bus excursions where the look-and-see method predominates.

While that particular method is quite suited to pupils in the elementary and lower secondary school, at higher secondary level education the more scientific principles associated with the inductive method appeal more to the enquiring teenage mind. Observation plays a dominant role in this method also. But it is accompanied by the need for accurate notation, leading to the formation of sound deductive principles in the natural environment.

Economic cut-backs in the late 1970s and early

1980s severely retarded the inclusion of field-work on the secondary school curriculum. In-service courses for teachers have had to be cancelled at the last minute due to departmental inability to fund the enterprise.

At present, field-work is a growing part of second level schooling in the Irish Republic. Field centers where one can study the natural environment using the inductive method are becoming more and more common.

Chapter Eight

GEOGRAPHY IN AMERICAN EDUCATION

To understand the development of geography education in America it is necessary to view the entire historical tapestry. At a time when geography became firmly established as an academic discipline in the schools and colleges of Europe, many factors emanating from the diverse nature of the country coalesced to militate against a similar growth to fruition across the Atlantic.

In Europe, the educational principles of Rousseau and Pestalozzi were incorporated in the professionalism of such geographers as Ritter, Elysee Reclus, Herbertson, Mckinder and Grenville Cole. In this way teachers were trained at the universities and were proficient in their teaching method as well as their geographical skills. The work of one great geographer could be passed on to thousands of students through capable, inspiring teachers.

Other factors helped the immediate adoption of academic geography in education in Europe, factors that were not so apparent in America. Europeans were accustomed to accepting orders from the top. Though democracy was an ideal for which they fought, they still had their Kings and Queens. Governments continued to lead the people. The old regime persisted, though altered considerably to reflect the French Revolution, the Industrial Revolution, and the growth of Labor Unions. Customs and mores that had been culturally imbued on Europeans for centuries could not be discarded overnight. They were still part of the rational fabric of the average European.

Prestigious bodies like the Royal Geographical Society were ever present and untiring in their efforts to keep geography in the forefront of education.

The result was that Chairs of Geography were set up and standards of intellectual achievement rose. Field-work centers opened and flourished, as it was perceived that experiential education was a welcome addition to turning the learning process into a motivational and happy event. The drive for equality of educational opportunity and quality education meant that more and more people were being exposed to geography. When comprehensive schooling was established in the 1970's, geography was a full subject in the school curriculum.

At the outset, it seemed that education and geography would go hand-in-hand in America. Instead, it appears that education and democracy went hand-in-hand. This, of course, is not a bad thing. All political ideals require educational vehicles to transport them to the people. Schools are important to governments.

Rousseau's and Pestalozzi's ideas did successfully cross the Atlantic and, as described earlier, became part of the schooling system of many areas. Ironically, the democratization process advocated by these men was one of the reasons that geography never had a real chance to be universally accepted. In a democracy universal acceptance can only happen by the majority consent. There were always too few people sufficiently inspired with the zeal of education and geography to infuse the growing population of a new and expanding country.

The American pragmatic attitude—"if it works, it's right"—helped explore, tame and inhabit a hostile continent. Schools were set up and it was to these common schools enthrusted the onerous task of civic, American and moral responsibilities. Where was there time for geography?

During the first half of the nineteenth century

American statesmen turned to education as the panacea for the country's social, religious and economic problems. Abraham Lincoln averred that education was the most important subject for Americans to be engaged in. Thomas Jefferson was adamant that freedom and ignorance would be impossible bedfellows. Education was the key in a world where life, liberty and the pursuit of happiness prevailed.

In the early days of the nation, natural rights of man, personal freedom, freedom of the press, religious liberty and citizen obligations were crucial factors for the effective functioning of a republican government. But without the diffusion of knowledge among the people, the experiment at self-government was doomed to failure. Jefferson preached a crusade against ignorance and championed education as the only sure foundation for the preservation of freedom and happiness.

In the late eighteen hundreds, America became asylum for the millions of oppressed, tired and hungry immigrants that fled European countries. New problems of ethnic origin accompanied each new wave of migration. The task of Americanizing these immigrants was turned over to the educational system—the common school. It was necessary to transform Europeans into loyal American citizens—else there would be 'little Italy', 'little England', 'little Ireland' and so forth. The process of assimilation further taxed the education system. But it worked—so it was right.

Lone voices continued to cry out about the plight of geography in the schools. Textbooks were needed. There were plenty geography books written in English, but they were British.

After Independence there was a perceived need for geography texts with an American slant. Anti-British feeling was high, a factor that lead to a bizarre turn of events. An American clergyman, Jedidiah Morse, perceived the demand and wrote a series of text books entitled - *American Geography*. Morse had more business acumen than geography and his publications were enormously successful, reaping a rich harvest of dollars—the first in educational publishing. Morse's texts were "staunchly American, orthodox in Religion and ultra-conservative in moral tone." [1]

His Geographies were merely literary accounts of geographical phenomena and were devoid of any intellectual stimulus. They were dramatically successful, nevertheless, and spread throughout America rapidly, in a time that Americans were eager to learn about their great land. Geography suffered a severe intellectual set-back, as a result. Consequently, it was dropped as an academic subject from the curriculum of most colleges in the latter half of the nineteenth century.

While geography flourished in the halls of academia in Britain, France and Germany, it disappeared from intellectual habitats in America. The simple method of transmitting information from the top, pyramidal fashion, was therefore thwarted. Teachers were no longer trained in the skills necessary for effective teaching of geography. Attempts lead usually to the same end-- Rote learning and memorization of long lists of Capes and Bays. Innovative ditties and anagrams which helped the retention of uninteresting facts were no substitute for the real thing. The lofty words of Socrates, Vives, Bacon and Rousseau fell on barren ground.

Every age begets enthusiastic, dedicated individuals who have been to the mountain and understand the need for geography in the lives of all who care for the planet. Ritter taught many brilliant geographers who in turn carried the torch to new students. Arnold Guyot was one such man. In 1854, he became professor of Physical Geography and Geology at the College of New Jersey. Guyot, and his fellow American pioneers of educational methodology, Barnard and Mann, were luminaries in an age of change and turmoil. Their work would have been rewarded with greater success if the burdens imposed on the education system hadn't been excessive.

William Morris Davis did much to foster the advancement of geography in America and Europe. (In 1910, he was in Ireland with Grenville Cole studying the superimposed drainage pattern and the strange, right-angled bend, discovered by jukes (1862), on the River Blackwater). It was Davis' interpretation of Geography—environmental determinism—that dominated American geography for the greater part of the century.

Davis was, like his contemporaries in Europe, an avid outdoor geographer. For him, there was no substitute for raw information, direct observations and the thrill of discovery associated with field-work. He was a strong advocate of outdoor field-work for school students. But once again the country was too large, the task too enormous for one enlightened individual. His many students, including Mark Jefferson carried the message to many more. As a result there are more geography educators now than at any previous time.

In many countries geography became coupled with history and civics to form a more manageable curriculum. In America these became known as "Social Studies." This came about for numerous reasons, all having some practical good qualities. But in all cases the effect on geography was detrimental. The umbrella of history and civics diluted a science that encompasses all our lives.

That geography should be treated as a viable academic subject in its own right was a question that many people were prepared to tackle and defend. But there was a world war going on. The national security was more important than academic justice.

After the war academic geographers refused to deal with social studies advocates and since it worked, it was right. The American Geographical Society made representations to educators to rectify the matter and raise geography to its rightful place in the classroom. Testimony on the pages of the various journals bear witness to the many fine educators and geographers, including Isaiah Bowman, a disciple of Davis and student of Jefferson, who championed the cause of better geography teaching and preached a crusade against drudgery and repetition. Geography, to these educators should be as inspiring as opening up new frontiers, reaching the poles for the first time or climbing the unclimbed peak.

Teacher training, or lack of it continued to be a problem. Through the Depression and the Second World War no major improvement occurred for geography in American education. The gap that existed between the expectations demanded of education and the stark reality in the classroom grew greater as new issues raised their heads.

The civil rights movement highlighted the real truth concerning the egaliarian ideal - equality of educational opportunity. Poor people and social and cultural minorities had genuine misgivings about the nature and quality of their education and that of their children. The educational horizons of a child were controlled by where s/he lived.

Educational experts have been overloaded with poverty programs, equality issues, federal and local issues and other economic and social matters that often run counter to the needs of geographers. Literacy levels need to be constantly upgraded in a new era of technological advance and artificial intelligence.

After the launching of Sputnik in 1957, the educational system was seen to need an overhaul. Federal grants were made available in a National Defense Education Act, 1958. At first science and mathematics were highlighted as needing attention, but later in 1969 geography was added. Times of war often throw more light on geography since new exotic names appear on our TV screens (like Grenada) and suddenly the press becomes aware that there is a gross lack of knowledge about anything geographic among the public. The educational system is, of course, the culprit, and another call to "bring back the basics" ensues. This type of democratic consent can often be harnessed to bring about reforms, but a strong unified body is needed to channel this public enthusiasm in the correct direction.

In 1888, the National Geographic Society was founded "for the increase and diffusion of geographic knowledge." One hundred years later education experts and geography professionals alike sit around the table to decry the poor state of geography education in the schools of the nation. The President of the Society proclaimed to the nation that "to better understand their environment and to compete in the world marketplace, students must receive a better geography background."[2]

The focus is good and the time is right. The ability and expertise is readily available. The need has been adequately exposed and new monies have been made ready. Gilbert M. Grosvenor, Society President and Chairman, announced a contribution of $20 million to establish the National Geographic Society Education Foundation. "There is no more fitting way to begin our second century, than with a renewed and expanded commitment to Geography Education. The Society's concern about the untenable consequences of geographic illiteracy compel us to take an even larger role in education, and we are in it for the long haul."[3]

The foundation's immediate priority is to serve the needs of the 22 Geographic Alliances established since 1986 by the Society's Geography Education Program. The Society was joined by educators and geographers alike in their mounting concern for geography illiteracy in schools accross the nation.

"Geography is a casualty of Education Innovation." [4]

A committment to teacher training is vital to improve the status of geography in our schools. The National Geographic Society held its third Summer Geography Institute for teachers from K-12 in 1988. In the course, teachers received academic instruction in Geography, assistance in developing geography teaching methods and materials and practice in the preparation and the delivery of in-service presentations. "A key objective of the Summer Geography Institute is to provide leadership training so that institute graduates can help reform local curricula and improve instruction. Upon completion of the institue, graduates are obligated to train other teachers in their districts and to work closely with members of their state alliances to improve geography education." [5]

The key to students receiving a better geography education was, and continues to be teacher training. There are some that look to computers as the new panacea for transforming classroom work, making it entertaining and refreshing for students. While games and problems on screen should not be overlooked in this hi-tech age, the cry of Socrates, and the plea of Pestalozzi, must not go unheard. The Geographer's true laboratory is the open space—the outdoor.

We are the keepers of the planet Earth for but a little while. We must ensure its safe passage to our grandchildren, and to their grandchildren. This they deserve. We have been shown the way.

Let them get first-hand experience in the field. Let them touch the acorn, see the oak tree, feel the wind and the rain. Let them drink in the warmth of the sun. The next hundred years will be a time of rich pleasures for one who has been schooled to do so.

When I hear I forget.

When I see I remember.

When I do I understand.

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